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Southern/Northern California Coastal Processes Annotated Bibliography: Coast of California Storm and Tidal Waves Study

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Author

US Army Corps of Engineers, Los Angeles District, Planning Division, Coastal Resources Branch

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California Coastal Processes Annotated Bibliography

US Army Corps of Engineers, Los Angeles District, Planning Division, Coastal Resources Branch 1985 (Southern California) and 1987 (Northern California)

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The California Coastal Processes Bibliography comprises 2,355 references to scientific literature & technical reports on the California coast: coastal processes, geology and geomorphology, hydrology and hydraulics, and meteorology. Compiled by the Los Angeles & San Francisco Districts of the Army Corps of Engineers, this Bibliography was published as part of the landmark Coast of California Storm and Tidal Waves Study (CCSTWS) and corresponds to the following publications:

- Southern California coastal processes : annotated bibliography : the coast of California storm and tidal waves study. Los Angeles. : US Army Corps of Engineers, Los Angeles District, Planning Division, Coastal Resources Branch, 1985. CCSTWS ; 85-4. Coast of California storm and tidal waves study 85-4
- Northern California coastal processes annotated bibliography : Coast of California storm and tidal waves study / prepared by U.S. Army Corps of Engineers, San Francisco District, Planning/Engineering Division, Water Resources Branch. Los Angeles : US Army Corps of Engineers, Los Angeles District, Planning Division, Coastal Resources Branch, 1987. CCSTWS 87-5. Coast of California storm and tidal waves study 87-5

Longshore Sand Transport Distribution Across The Surf Zone Due to Random Waves AUTHOR(S): Abdelrahman, S. M. SOURCE: Master's Thesis, Naval Postgraduate School, Monterey, California 87 pp. DATE: 06/01/83 ABSTRACT: In the present study analytical and numerical models are developed based on a longshore current model for random waves and sediment transport formulation by Thornton to predict the cross- shore sediment transport

distribution and to compute the total volume of sand transport. The model is compared with the field data acquired from Leadbetter Beach, Santa Barbara, California. KEYWORDS: Coastal Processes wave transformation, longshore current, longshore transport California, South Central Region, Subregion VII, Santa Barbara Cell Wave Runup on Idealized Structures AUTHOR(S): Ahrens, J. P. SOURCE: U. S. Army Corps of Engineering, Coastal Engineering Research Center. Vicksburg, Miss., CERC Reprint 83-9, pp. 925-938 DATE: 01/01/83 ABSTRACT: Discusses both monocromatic and irregular wave runup on idealized structures. Some of the more interesting characteristics are noted, and compared where possible. KEYWORDS: Coastal Processes wave transformation California Report on a Reconnaissance of the Western Coast From San Francisco South to San Diego, Including Santa Barbara Islands and Channel, California AUTHOR(S): Alden, J. SOURCE: Annual Report, U. S. Coast Survey 1852, California Divn. of Mines and Geology, Sacramento, California, pp. 104-107 DATE: 01/01/01 not reviewed ABSTRACT: KEYWORDS: Coastal Processes coastal erosion problems California, South Central Region, South Coast Region, San Diego Region Beach Foreshore Sedimentation by Organic and Inorganic Processes AUTHOR(S): Anderhalt, R. W. Ph.D. Thesis, Geology Department, University of California, Los SOURCE: Angeles, California, 197 pp. DATE: 01/01/81 ABSTRACT: Inorganic processes of sedimentation can be studied with the small-scale sedimentary sequence. Small-scale sedimentary sequences are the trends observed in the sediment characteristics from closely spaced, mmscale, stratigraphic intervals. Swash-zone depositional processes may be inferred from the type of sequence observed. Some of the trends correspond to recognizable layers of laminae in the sediment but in places these sequences are not visually obvious. KEYWORDS: Geomorphology geomorphic processes, grain size, littoral sediment, maps, petrology, sedimentation California, South Coast Region, Subregion IX, Santa Monica Cell

Experiments On the Rate of Wear of Sand Grains AUTHOR(S): Anderson, G. E. SOURCE: Journal of Geology, Vol. 34, pp. 144-158 DATE: 01/01/26 ABSTRACT: Texture data is given for two samples collected from the beach 5 miles north of Huntington Beach. KEYWORDS: Geomorphology geomorphic processes, grain size, littoral sediment California, South Coast Region, Subregion IX, San Pedro Cell Detecting Hydrologic Effects of Changes in Watershed Conditions by Double-Mass Analysis AUTHOR(S): Anderson, H. W. Trans, American Geophysical Union, Vol. 36, No. 1, pp. 119-125 SOURCE: DATE: 02/01/55 ABSTRACT: Used double-mass analysis to detect changes in the condition of a watershed above Gibraltar Reservioir, Santa Ynez River Basin. Sedimentation and peak inflow increased markedly following fires of 1932 and 1933, but decreased during recovery from fires. Annual flow total was unchanged as opposed to peak flow. KEYWORDS: Hydrology & Hydraulics fires, river sediment discharge, river discharge California, South Central Region, Subregion VI, Subregion VII, Santa Ynez River Cell, Santa Barbara Cell Coastal Applications of U.S.G.S. Land Use Data AUTHOR(S): Anderson, J. R.; Lins, H. F. SOURCE: Coastal Zone '78, Vol. II, ASCE, N.Y., pp. 943-964 DATE: 01/01/78 ABSTRACT: As part of a plan to map land cover on a nationwide basis by 1982, the Geological Survey has completed a series of land use and land cover maps covering all coastal areas of the contiguous 48 states except for the Great Lakes. The maps are being published at a scale which conforms with the 1:250,000-scale base maps and with the new 1:100,000-scale base maps for coastal areas. These land use and land cover maps provide information as presented in U.S.G.S. Prof. Paper 964. KEYWORDS: Geomorphology geology, maps, population, shoreline use California The Cost of Public Access AUTHOR(S): Anderson, S. H. SOURCE: Coastal Zone '78, Symposium, San Francisco, California, March 14-16,

1978; ASCE, N. Y., Vol. I, pp. 402-412 DATE: 01/01/78 ABSTRACT: Addresses questions of public access to coastal waters and open space immediately adjacent to the land/sea interface and its cost as a critical component of the provision of recreational opportunities. KEYWORDS: Coastal Processes, Socioeconomics institutions/planning/mgmt., shoreline use California, South Coast Region, Subregion VIII, Santa Monica Cell, S. Santa Monica Reach Engineering and Planning Considerations for Boating Facilities Siting on the California Coast AUTHOR(S): Anderson, S. H. SOURCE: Coastal Zone '83, Symposium, San Diego, California, June 1-4, 1983; ASCE, N. Y., Vol. III, pp. 2859-2865 DATE: 01/01/83 ABSTRACT: Southern California small craft harbor locations are evaluated from technical, environmental, and general planning perspectives. KEYWORDS: Coastal Processes environmental constraints, growth potential/recreation, institutions/planning/mgmt. California, South Central Region, South Coast Region, San Diego Region San Diego Dredging Project Replenishes Beaches AUTHOR(S): Anonymous World Dredging and Marine Construction, Vol. 14, No. 2, pp. 7-8 SOURCE: DATE: 02/01/78 The U.S. Army Corps of Engineers in cooperation with the San ABSTRACT: Diego Unified Port District and the U.S. Navy contracted to dredge nearly eight million yards of sand from the harbor and turning basins at San Diego Harbor. The material was used to replenish the beaches and reclaim an area for a new small boat marina. Material was pumped to Imperial Beach, and to replenish the U. S. Navy's training area at Delta Beach. KEYWORDS: Coastal Processes beach nourishment/dredging California, San Diego Region, Subregion X, Silver Strand Cell Coastal Winter Storm Damage, Malibu, Los Angeles County, Winter 1977-78 AUTHOR(S): Armstrong, G. A. SOURCE: In: Storms, Floods and Debris Flows in South. Calif. and Ariz., 1978-1980, Proc. of Symp. Sept. 17-18, 1980, Nat'l Res. Council and C.I.T., National Academy Press, Wash., D. C., pp. 423-436 DATE: 01/01/82

ABSTRACT: Describes damages to California coast from series of storms December 1977 through April 1978; tides, offshore winds, high storm waves, and excessive precipitation. KEYWORDS: Coastal Processes storm damage, storms/floods, storm waves, tides, wave climate, precipitation California, South Coast Region, Subregion VIII, Santa Monica Cell Analysis of the Southern California Santa Ana of January 15-17, 1966 AUTHOR(S): Aronovitch, B. B. SOURCE: Tech. Memo. No. WBTM WR-42, U. S. Deptartment of Commerce, Weather Bureau, 10+ pp. DATE: 09/01/69 ABSTRACT: Details of an intense Santa Ana windstorm. Includes surface and 500 mb charts before and during the storm. Also includes radar observations and radiosonde observations at San Diego. KEYWORDS: Oceanography & Meteorology storms/floods, wind California, South Coast Region The Effect of Islands On Surface Waves AUTHOR(S): Arthur, R. S. SOURCE: Bulletin of Scripps Inst. of Ocean., Univ. of California Press, Berkeley, Calif., Vol. 6, No. 1, pp. 1-26; and SIO Reference Series 51-23. Scripps Inst. of Ocean., La Jolla, Calif., 28 pp. DATE: 01/01/51 ABSTRACT: An investigation is made of factors influencing the wave conditions in the wave shadow of islands. The characteristics and mean direction of approach of the incident waves are assumed to be known. The penetration of wave energy into the region to the lee of the islands is determined by the following factors; 1) the effect of underwater topography off the island's shores in refracting wave energy into the lee, 2) the effect of currents near the island in refracting energy, 3) the diffraction effect resulting when a barrier interrupts wave fronts, and 4) the effect of variability in direction of wave travel in limiting the extent of the shadow. The quantitative KEYWORDS: Coastal Processes wave climate, wave transformation, nearshore currents California, South Coast Region, San Diego Region, Subregion IX, Subregion Wave Forecasting and Hindcasting AUTHOR(S): Arthur, R. S.

SOURCE: Proceedings of First Conference on Coastal Engineering, Long Beach,

Calif., Chapter 8, October, 1950, pp. 82-87; and SIO Ref. Series 51-56, Scripps Inst. of Ocean., La Jolla, Calif., 7 pp. DATE: 01/01/51 ABSTRACT: Sea, swell, and surf. The present discussion is confined to a brief consideration of 1) forecasting sea and swell, 2) the significance and applications of the forecast, and 3) hindcast- ing and its applications. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Late Quarternary Deformation Along the Nacion Fault System San Diego, California AUTHOR(S): Artim, E. R.; Elder, D. L. SOURCE: Geol. Soc. of Amer., Annual Meeting, San Diego, California, p. 381 DATE: 01/01/79 ABSTRACT: Abstract; the geologic history of the fault is described for the last 10,000 years. KEYWORDS: Geomorphology geology, neotectonics California, San Diego Region, Subregion X, Mission Bay Cell Water Conditions and Flood Events in California, Water Year 1977-1978 AUTHOR(S): Arvola, W.; Sullivan, H. J.; Clark, B. E.; Helms, W. J. SOURCE: Bulletin 202-78, State of California, Department of Water Resources, Sacramento, California, 76 pp. DATE: 12/01/79 Descriptions of floods of 1977 through 1978. Includes ABSTRACT: detailed meteorological and flood damage descriptions. Also includes isoheytal map of California and stream flow (maximum and total runoff) in selected basins. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, storms/floods California, South Central Region, South Coast Region, San Diego Region Water Conditions and Flood Events in California, Water Year 1977-78 AUTHOR(S): Arvola, W.; Sullivan, H. J.; Clark, B. E.; Helms, W. J. SOURCE: Bulletin 202-78, California Department of Water Resources, Sacramento, California, 76 pp. DATE: 12/01/79 Descriptions of floods for 1977-78. Includes detailed ABSTRACT: meteorological descriptions, isohyetal map of California, stream flow (maximum and total runoff) in selected basins. Gives descrip- tion of floods and flood damage. No weather maps. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, storms/floods California, South Central Region, South Coast Region

Rates of Coastal Bluff Retreat, Pismo Beach, California AUTHOR(S): Asquith, D. O. SOURCE: Coastal Zone '83, Symposium, San Diego, California, June 1-4, 1983; ASCE, N. Y., Vol. II, pp. 1195-1207 DATE: 01/01/83 ABSTRACT: Investigation of rates of bluff retreat at a half-mile-long section of the coast in Pismo Beach Dinosaur Caves Area using photos, maps, and markers. Includes data, and presents a projected 100-year edge of bluff. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, geomorphic processes, geology, shoreline changes California, South Central Region, Subregion VI, Santa Maria River Cell Rates of Coastal Bluff Retreat, Pismo Beach, California AUTHOR(S): Asquith, D. O. SOURCE: Coastal Zone '83, ASCE, N.Y., pp. 1195-1207 DATE: 01/01/83 ABSTRACT: Rates of bluff retreat determined from measurements on CalTrans aerial photographs taken in 1954, 1963, 1965 and 1978 indicate rates of retreat ranging from no measurable change (maximum rate of 0.1 ft/yr) in the resistant units to approxi- mately 1.1 ft/yr in the less resistant units. A similar range of rates was obtained by remeasurement of distances to the edge of the bluff as indicated on a map of a part of the site prepared from aerial photographs taken in 1974. KEYWORDS: Geomorphology cliff sediment, geology, maps, coastal erosion, shoreline changes California, South Central Region, Subregion VII, Morro Bay Cell Preventing Coastal Flood Disasters: The Role of the States and Federal Response AUTHOR(S): Association of State Flood Plain Mgrs. SOURCE: Proceedings of a National Symposium, Ocean City, Maryland, May 23-25, 1983, J. Monday, Ed., Association of State Floodplain Managers, Inc., Madison, Wisc., 386 pp. DATE: 10/15/83 ABSTRACT: The symposium explored innovative approaches to reduce loss of life and massive property losses resulting from major coastal storms. State and federal support programs for mitigation were addressed. The symposium focus was to assess and strengthen State hazard mitigation approaches and to suggest how federal resources can best be used to support innovative and costeffective programs and reduce potential disaster losses. KEYWORDS: Coastal Processes, Socioeconomics

institutions/planning/mgmt., storm damage California, Oregon Beach Profiles at Torrey Pines, California AUTHOR(S): Aubrey, D. G.; Inman, D. L.; Nordstrom, C. E. SOURCE: Proceedings of 15th Coastal Engineering Conference, Honolulu, Hawaii, July 11-17, 1976; ASCE, N. Y., pp. 1297-1311 DATE: 01/01/76 ABSTRACT: Beach profiles at Torrey Pines over four years. Correlations with tides and accurate spectral estimates of the incident wave field. KEYWORDS: Coastal Processes beach profiles, tides California, San Diego Region, Subregion X, Oceanside Cell Seasonal Patterns of Onshore/Offshore Sediment Movement AUTHOR(S): Aubrey, D. G. SOURCE: NOAA Office of Sea Grant Report No. WHO1-CONTRIB-4354; NOAA-79122615, 9 pp.; and Journal of Geophysical Research, Vol. 84, No. Cl0, 20 October, 1979, pp. 6347-6354 DATE: 10/01/79 Measurements of beach profiles from Southern California ABSTRACT: spanning a 5-year period have been examined for temporal changes in beach configuration. On an annual time scale the data suggest two distinct seasonal pivotal points separating eroding and accreting regions. A simple model of depthdependent seasonal sand movement suggests that during initial winter storms, sand is eroded from both the foreshore and from depths of 6-10 m, and is deposited in water depths from 2 to 6 m. During less ener- getic periods, sediment migrates both shoreward (to the beach face) and seaward (to depths of 10 m) from its winter site of deposition. This observation of depth-dependent motion contra-KEYWORDS: Coastal Processes beach profiles, longshore transport, offshore/onshore transport California, South Central Region, South Coast Region, San Diego Region The Statistical Prediction of Beach Changes in Southern California AUTHOR(S): Aubrey, D. G.; Inman, D. L.; Winant, C. D. SOURCE: Journal of Geophysical Research, Vol. 85, No. C6, pp. 3264-3276 DATE: 06/20/80 ABSTRACT: Changes in natural sand beaches induced by variations in incident waves were predicted by techniques of linear statisti- cal estimation and empirical eigenfunction analysis. A 5-year set of measured beach profiles and wave statistics from Southern California constituted the data base for this

two-faceted stat- istical study. Daily beach profile changes were predicted using four different spectral representations of the wave field. These profile changes were predictable using spectral represent- ations of wave energy, radiation stress, energy flux, and wave steepness. Because of constraints on statistical reliability, a longer data set is required to select one of these as an optimal wave parameterization. Weekly beach profile changes KEYWORDS: Coastal Processes beach profiles, wave climate, wave transformation, longshore transport, offshore/onshore transport California, South Central Region, South Coast Region, San Diego Region Heavy Minerals in Sediments of Southern California AUTHOR(S): Azmon, E. SOURCE: Ph.D. Thesis, University of Southern California, Los Angeles, California, 139 pp. DATE: 06/01/60 ABSTRACT: Heavy mineral data on samples collected from rock outcrop, river bed, beach, and off shore sample sites is presented. The sample sites extend from Santa Barbara County through San Diego County. KEYWORDS: Geomorphology littoral sediment, geology, petrology, watershed sediment, river-bed sediment California, South Central Region, South Coast Region, San Diego Region Putting the Beach Back at the Oceanside AUTHOR(S): Bagley, L. M.; Whitson, D. H. SOURCE: Shore & Beach, Vol. 50, No. 4, pp. 24-32 DATE: 10/01/82 ABSTRACT: The City of Oceanside experience beginning with construction of Camp Pendleton through solution of beach erosion problem by sand by-pass system for beach restoration. KEYWORDS: Coastal Processes beach nourishment/dredging, growth potential/recreation California, San Diego Region, Subregion X, Oceanside Cell Beach and Nearshore Processes, Part 1, Mechanics of Marine Sedimentation AUTHOR(S): Bagnold, R. A. SOURCE: In: The Sea, Ideas and Observations on Progress in the Study of the Seas, Vol III, M. H. Hill, Gen'l Ed., Interscience Publishers, John Wiley & Sons, N. Y., pp. 507-528 DATE: 01/01/63 ABSTRACT: Discussion of sedimentation, including wave drift. KEYWORDS: Coastal Processes sedimentation, longshore transport California, Oregon, Mexico

An Energetics Bedload Model for a Plane Sloping Beach: Local Transport

AUTHOR(S): Bailard, J. D.; Inman. D. L. Journal Of Geophysical Research, Vol.86, No. C3, pp. 2035-2043 SOURCE: DATE: 03/20/81 ABSTRACT: Bagnold's energetics-based sediment transport model for streams is used as a basis for the development of a model for the time-varying transport of bedload over a plane sloping bed. The sediment transport vector is found to consist of two components: the velocity-induced transport, directed parallel to the instantaneous velocity vector, and the gravity-induced transport vector. directed downslope. The model is applied to the case of sediment transport within the surf zone for the separate cases of weak and strong longshore currents, relative to the wave (bore) oscillatory water velocity. KEYWORDS: Coastal Processes offshore/onshore transport, longshore current, California Experimental Sand-Bypassing System at Oceanside Harbor, Oceanside, San Diego County, California, Phase 1A, Fluidizer an Eductor-Crate System AUTHOR(S): Bailard-Jenkins Consultants SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, Design Report L-2034.40, 75+ pp. DATE: 06/01/83 ABSTRACT: Describes the design installation operation and maintenance of two fluidizer-eductor systems to be incorporated as part of the experimental sand bypass system for Oceanside Harbor. System is considered experimental. Includes data. KEYWORDS: Coastal Processes longshore transport, coastal structures California, San Diego Region, Subregion X, Oceanside Cell Geodetic Leveling and the Sea Level Slope Along the California Coast. AUTHOR(S): Balazs, E. I.; Douglas, B. C. National Geodetic Survey Report No. NOAA-TM-NOS-NGS-20, NOAA-SOURCE: 79102402, Wash., D.C., 27 pp. DATE: 09/01/79 ABSTRACT: New leveling surveys have been performed between the San Francisco and San Pedro tide stations for the epochs 1968-69, 1968-71, 1971-72, 1973-75 and 1977-78. The observed elevations at these tide stations are compared to mean sea levels of the 1941-59 epoch. Leveling surveys show very good consistency with a steady trend from negative to positive between 1968 and 1978. This trend indicates that San Pedro is rising with respect to San Francisco or

that San Francisco is subsiding with respect to San Pedro at an average rate of about 70 mm/yr. However, the indicated relative movement rate from leveling is about 30 times greater than the rate indicated by tidal KEYWORDS: Coastal Processes sea level change California, South Coast Region, Subregion IX, San Pedro Cell Wave Action in Mission Bay Harbor, California AUTHOR(S): Ball, J. W.; Brasfeild, C. W. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report H-69-8, 15 pp. DATE: 06/01/69 ABSTRACT: A hydraulic model investigation of the wave-action problems in Mission Bay Harbor was conducted to develop and test several plans of improvement proposed for reducing wave heights within Quivera Basin and Glen Rick Cove to a satisfactory level. The 1:100-scale model, molded in cement mortar, reproduced the portion of the harbor requiring remedial action, and sufficient coastline and offshore bathymetry to permit accurate stimulation of storm-wave attack in the area. It was concluded that modifying the curved portion of the south bank of the entrance channel to a series of rightangled steps would provide adeq- ate protection to Quivera Basin and Glen Rick Cove during attack by short-period storm waves. Includes data. KEYWORDS: Coastal Processes, Hydrology & Hydraulics coastal structures, wave climate, wave transformation California, San Diego Region, Subregion X, Mission Bay Cell Surf Observations and Longshore Current Predictions AUTHOR(S): Balsillie, J. H. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center. Vicksburg, Miss., CERC Tech. Memo 58, 49 pp. DATE: 11/01/75 Simultaneous field observations of breakers and current ABSTRACT: behavior using techniques of the LEO program are presented. Longshore current behavior is investigated by observed and predicted observations. The data base represents a 1-year collection effort at Point Mugu, California. KEYWORDS: Coastal Processes wave transformation, nearshore currents California, South Central Region, Subregion VII, Santa Barbara Cell, S. Santa Barbara Reach Erosion Losses from a 3-Day California Storm

AUTHOR(S): Bamesberger, J. G.

SOURCE: U. S. Department of Agriculture, Soil Conservation Service, 23 pp. DATE: 01/01/39 ABSTRACT: Documents the storm of February 28, 1938 through March 3, 1938. Calculates the soil loss over Ventura, Los Angeles, and Orange Counties. Tn particular, measuremnts were made in the Las Posas, La Hebra and Aliso Creek areas. Losses categorized by soil type, land use, and type of cover. May be useful for historic reconstruction of flood events, sediment losses, and transport to the ocean. Includes photos. KEYWORDS: Hydrology & Hydraulics storms/floods, urbanization, watershed sediment California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, S. Santa Monica Reach, San Pedro Cell Wind Waves AUTHOR(S): Barber, N. F.; Tucker, M. J. In: The Sea, Ideas and Observations on Progress in the Study of SOURCE: the Seas, Vol.1, Physical Oceanography, M. N. Hill, Gen'l Ed., Interscience Publishers, John Wiley & Sons, N. Y., pp. 664-699 DATE: 01/01/62 ABSTRACT: Kinematics of waves, wave spectrum, wave generation and predic- tion and types of waves are presented. Also methods of observa- tion and analysis are compared. KEYWORDS: Coastal Processes wave climate, wave transformation, nearshore currents California, San Diego Region, Subregion X, Oceanside Cell Wind Waves in Shallow Water AUTHOR(S): Barnett, T. P. Final Report, Contract # N 62306-67 C-0267 for U. S. Naval SOURCE: Oceanographic Office, Westinghouse Ocean Research Lab., San Diego, California, 56 pp. DATE: 01/01/01 ABSTRACT: not reviewed KEYWORDS: Coastal Processes wave climate, wave transformation California Statistical Prediction of North American Air Temperatures from Pacific Predictors AUTHOR(S): Barnett, T. P. SOURCE: Monthly Weather Review, Vol. 109, No. 5, pp. 1021-1041 DATE: 05/01/81 ABSTRACT: Statistical sudy shows that sea surface temperatiure (SST) anomalies in the Pacific can forecast surface air temperatures over North America. Also finds a correlation with sea level pressure (SLP).

KEYWORDS: Oceanography & Meteorology climatology California El Nino - Southern Oscillation Episode of 1982-83 AUTHOR(S): Barrientos, C. S. SOURCE: Mariners Weather Log, Vol. 28, No. 2, pp. 81-84 DATE: 01/01/84 ABSTRACT: Sea surface temperatures, winds (primarily trade winds) and the southern oscillation index are given for the El Nino - Southern Oscillation (ENSO) episode of 1982-83. Includes a discussion of the historical context, and of world-wide impacts. KEYWORDS: Oceanography & Meteorology El Nino, climatology California San Elijo Lagoon Erosion and Sediment Study AUTHOR(S): Barry, J. N.; Rodgers, R.; Greenhood, J. SOURCE: County of San Diego, Department of Sanitation and Flood Control, San Diego, California, 40 pp. DATE: 04/23/76 ABSTRACT: Description of problems associated with development near the San Elijo Lagoon on the coast near San Diego. Some calculations of sedimentation due to development, but raw data are limited. KEYWORDS: Hydrology & Hydraulics sedimentation, tidal inlets, urbanization, watershed sediment California, San Diego Region, Subregion X, Oceanside Cell Catalog of Tidal Inlet Photography AUTHOR(S): Barwis, J. H. U. S. Army Corps of Engineers, Waterways Exp. Sta., Hydraulics SOURCE: Lab., Vicksburg, MS, and Coastal Eng. Res. Center, Ft. Belvoir, Virginia, GITI Report No. 75-2, 166 pp. DATE: 06/01/75 ABSTRACT: Data on approximately 6000 photographic coverages of tidal inlets are presented in tabular form, along with information on how any given photograph may be obtained. The compilation covers inlets along the Atlantic, Gulf, and Pacific coasts of the contiguous U. S. coastaline from 1938 to 1974, and includes inlet name; geographic coordinates; National Ocean Survey navigation chart covering inlet; Georef. grid squares; month and year of photography; Federal, state or commerical agency holding film; project number; pertinent exposure numbers; scale; film type. KEYWORDS: Hydrology & Hydraulics, Coastal Processes, Survey aerial photography, deltas, estuarine sediment storage, tidal inlets, littoral

sediment, river sediment discharge California, Oregon Surf Zone Currents, Volume II, Annotated Bibliography AUTHOR(S): Basco D. R.; Coleman, R. A. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Misc. Report 82-7 (II), 93 pp. DATE: 09/01/82 ABSTRACT: Annotated bibliography of nearshore and surf zone currents. KEYWORDS: Coastal Processes wave transformation, nearshore currents California Surf Zone Currents, Volume I, State of Knowledge AUTHOR(S): Basco, D. R. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Misc. Report 82-7(1), 243 pp. DATE: 09/01/82 ABSTRACT: Major study of coastal currents. State-of-the-art summary of theories and experiments since 1967. KEYWORDS: Coastal Processes wave transformation, nearshore currents California, San Diego Region, Subregion X, Oceanside Cell The Movement and Burial of Cylindrical Ground Mines on Sandy Bottoms AUTHOR(S): Bascom, W.; Fry, J. Scripps Institution of Oceanography, La Jolla, California, SIO SOURCE: Reference Series 53-17, 15 pp. DATE: 01/01/53 ABSTRACT: Investigation to determine water motion on the bottom of tidal estuaries and in nearshore waters that cause ground mines to move or bury when placed on sandy bottoms. The why and how are explored. KEYWORDS: Coastal Processes tidal inlets, longshore current, nearshore currents California, San Diego Region, Subregion X, Oceanside Cell, Silver Strand Cell Waves and Beaches - The Dynamics of the Ocean Surface AUTHOR(S): Bascom, W. SOURCE: Anchor Press/Doubleday, Garden City, N. Y., 366 pp. DATE: 01/01/80 ABSTRACT: Discussion of how waves and beaches behave under all kinds of conditions. KEYWORDS: Coastal Processes wave climate, wave transformation, beaches, storm surge, storm waves, shoreline changes California, South Central Region, South Coast Region, San Diego Region Investigation of Coastal Sand Movements Near Santa Barbara, California AUTHOR(S): Bascom, W. N. SOURCE: University of California, Inst. Engineering Research, Berkeley, California, Ser. 14, Issue 8, PT I, 38 pp.

DATE: 01/01/51 ABSTRACT: not reviewed KEYWORDS: Coastal Processes longshore transport California, South Central Region, Subregion VII, Santa Barbara Cell Report on Rainfall and Runoff in the Los Angeles County Flood Control District, Seasons 1932-1933 and 1933-1934 AUTHOR(S): Baumann, P.; Laverty, F. B. SOURCE: County of Los Angeles, Flood Control District, Hydraulic Department, Los Angeles, California, 356 pp. DATE: 06/15/35 ABSTRACT: Tabular and graphical data from 1932 through 1934 water years. Includes daily precipitation, isohyetal maps, reservoir levels, and many hydrographs at stations throughout Los Angeles County. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, reservoirs, watersheds California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, S. Santa Monica Reach, San Pedro Cell Report on Rainfall, Runoff and Dam Operation in Los Angeles County Flood Control District, Season 1934-35 and 1935-36 AUTHOR(S): Baumann, P.; Laverty, F. B. SOURCE: Los Angeles County Flood Control District, Hydraulic Deptarment, Unpublished report, Los Angeles, California, 53+ pp. DATE: 10/10/37 ABSTRACT: Precipitation and runoff data for 1934 to 1936. Includes monthly rainfall summary, maximum rainfall, intensities for five minutes to twenty-four hours, isohyetal maps, dam opera- tion records, storm hydrographs from selected gages, and runoff data (tables). Also includes Los Angeles and San Gabriel Rivers plus many smaller creeks and washes. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, storms/floods California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, San Pedro Cell Suspended Sediment Over Redondo Submarine Canyon and Vicinity, Southern California AUTHOR(S): Beer, R. M. SOURCE: Master's Thesis, University of Southern California, Los Angeles, California, 131 pp. DATE: 01/01/69 ABSTRACT: not reviewed KEYWORDS: Coastal Processes sedimentation, submarine canyons California, South Coast Region, Subregion VIII, Santa Monica Cell

Distribution, Composition, and Transport of Suspended Sediments in Redondo Submarine Canyon and Vicinity, California AUTHOR(S): Beer, R. M.; Gorsline, D. S. SOURCE: Marine Geology, Vol. 10, No. 3, pp. 153-175 DATE: 01/01/71 ABSTRACT: not reviewed KEYWORDS: Coastal Processes submarine canyons, offshore/onshore transport California, South Coast Region, Subregion VIII, Santa Monica Cell Variations in Groin Design AUTHOR(S): Berg, D. W.; Watts, G. M. SOURCE: Coastal Engineering, Santa Barbara Specialty Conference, Oct. 1965, ASCE, N. Y., Chapter 33 DATE: 01/01/65 ABSTRACT: not reviewed KEYWORDS: Coastal Processes coastal structures California, South Central Region, South Coast Region, San Diego Region Time-Interval Photography of Littoral Phenomena AUTHOR(S): Berg, D. W.; Hawley, E. F. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Reprint 9-73 DATE: 07/01/73 ABSTRACT: Incorporates commercially available 16-mm motion picture cameras with automatic lenses, remotely programmed to shoot selected lengths of film at predetermined periods. Time- interval cinematography at two sites: Point Mugu and Newport Beach, California. KEYWORDS: Coastal Processes aerial photography California, South Coast Region, Subregion VII, Subregion IX, Santa Barbara Cell, San Pedro Cell Road Log, Maps and Stratigraphic Sections, Newport Lagoon to San Clemente, California AUTHOR(S): Bergen, F. W. SOURCE: In: Geologic Guide Book, Coastal Exposures of Miocene and Early Pliocene Rocks, Pacific Section, Soc. of Econ. Min. and Paleon., Bakersfield, California, pp. 1-21 DATE: 10/23/71 ABSTRACT: Selected locations are described, along with geologic maps showing coastal geology. KEYWORDS: Geomorphology cliff sediment, geology, maps California, South Coast Region, Subregion IX, San Pedro Cell

Geology of the Proposed Camp Pendleton LNG Site, San Diego County, California AUTHOR(S): Berggren, R. G. SOURCE: In: Geologic Guide of the San Onofre Nuclear Generating Station and Adjacent Regions of So. Calif., D. L. Fife, Ed., Amer. Assoc. of Petr. Geol., Bakersfield, California, pp. A49-A62 DATE: 01/01/77 ABSTRACT: This report describes the geologic units and structures at the proposed LNG site, and the influence of geologic hazards and constraints to development such as massive landsliding and extremely rapid fluvial erosion. KEYWORDS: Geomorphology cliff sediment, geology, watershed sediment California, San Diego Region, Subregion X, Oceanside Cell Recency of Faulting on the Mount Soledad Branch of the Rose Canyon Fault Zone in Northwestern Metropolitan San Diego County, California AUTHOR(S): Berggren, R. G.; Streiff, D. SOURCE: Annual Meeting, Geol. Soc. of Amer., San Diego, California, p. 387 DATE: 01/01/79 Abstract; landslides were used to date the fault. ABSTRACT: KEYWORDS: Geomorphology geology, neotectonics California, San Diego Region, Subregion X, Mission Bay Cell Tsunami Research Opportunities, An Assessment and Comprehensive Guide AUTHOR(S): Bernard, E.; Goulet, R. Sponsor: National Science Foundation, Report No. NSF/PAG-81001; SOURCE: Pacific Marine Environmental Labs, NOAA, Seattle, Washington, 59 pp. DATE: 09/01/81 To reduce the impacts of future tsunamis, this research ABSTRACT: focuses on forecasting tsunami dangers and evaluating coastal tsunami hazards. Described are the nature of tsunamis, their impact on United States coastal areas, and progress made in forecasting ability since 1960. The status of current research is presented in regard to tsunamigenic earthquakes and tsunami generation, propagation, terminal effects, instrumentation, warning systems, social response, and risk. Federal and state agency participa- tion in tsunamirelated research is outlined and a comprehensive tsunami research plan is presented. KEYWORDS: Coastal Processes tsunamis, institutions/planning/mgmt. California, Oregon, Mexico

Feasibility Study on Mitigating Tsunami Hazards in the Pacific

AUTHOR(S): Bernard, E. N.; Landu, J. F.; Hebenstreit, G. T. SOURCE: Pacific Marine Environmental Lab., Report No. NOAA-TM-ERL-PMEL-37, National Oceanic and Atmospheric Administration, Seattle, Washington, 49 pp. DATE: 12/01/82 ABSTRACT: This study shows that many aspects of existing U.S. technology have potential applications to the problem of providing early tsunami warning information in developing nations of the Pacific which do not have their own regional warning network. A simple conceptual model is developed which shows how these technologies could be integrated into an early warning system. KEYWORDS: Coastal Processes tsunamis California California Current Eddy Formations: Ship, Air, and Satellite Results AUTHOR(S): Bernstein, R. L.; Breaker, L.; Whritner, R. SOURCE: Science, Vol. 195, No. 4276, pp. 353-359 DATE: 01/28/77 Quantitive measurements of the circulation of the California ABSTRACT: current, obtained through hydrographic determinations of temperature and salinity, are being augmented by satellite data. KEYWORDS: Coastal Processes coastal currents, hydrographic surveys, remote sensing California Conditions at Long Beach, California AUTHOR(S): Blackman, J. W. SOURCE: Shore & Beach, Vol. 4, p. 159 DATE: 01/01/36 ABSTRACT: not reviewed KEYWORDS: Coastal Processes beaches California, South Coast Region, Subregion VIII, San Pedro Cell Storm Types and Resultant Precipitation in the San Diego Area AUTHOR(S): Blake, D. Monthly Weather Review, Vol. 61, No. 8, pp. 223-225 SOURCE: DATE: 08/01/33 ABSTRACT: Used Pacific weather maps from 1929 through 1933 to determine the origin of rain storms in the San Diego area. Divides the storms into four types: "North" Pacific (all low pressure cells and cold front storms), "South" Pacific (all storms from south of San Francisco, north of the Tropic of Cancer), Interior (which originate over the Colorado Plateau), and Mexican (tropical stroms). Finds that most rain is the resul of "North" Pacific type. Includes tables of data. KEYWORDS: Oceanography & Meteorology precipitation, storms/floods

California, San Diego Region, Subregion X Observations on the Physical Geography and Geology of the Coast of California from Bodega Bay to San Diego AUTHOR(S): Blake, W. P. SOURCE: Annual Report U. S. Coast Survey 1855, Calif. Divn. of Mines and Geology, Sacramento, California, pp. 376-398 DATE: 01/01/01 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geology, beaches California, South Central Region, South Coast Region, San Diego Region Major Currents Off the West Coast of North and South America AUTHOR(S): Boisvert, W. E. SOURCE: U. S. Naval Oceanographic Office, Washington, D. C., Tech. Report 221, 34 pp. DATE: 01/01/69 ABSTRACT: not reviewed KEYWORDS: Coastal Processes coastal currents California, Oregon, Mexico Design Study For a Suggested Wave Gage Array off Point Mugu, California AUTHOR(S): Borgman, L. E.; Panicker, N. N. Technical Report HEL 1-14, University of California Hydraulic SOURCE: Engineering Laboratory, Berkeley, California, 23 pp. DATE: 01/01/70 ABSTRACT: The report presents the design of a wave gage array for possible use at the Point Mugu site. The function of the array would be to provide information on the directionality of the combined incoming waves and to vield data for operationally testing the various proposed schemes for computing the directional wave spectrum. Includes profiles and bottom topography at Muqu. wave force data near Davenport, wave periods at Oceanside, wave characteristics at Ventura Marina, and surf at Point Loma and Point Arguello. KEYWORDS: Coastal Processes beach profiles, hydrographic surveys, wave climate, California, South Central Region, South Coast Region, San Diego Region Budget of Littoral Sands in the Vicinity of Point Arguello, California AUTHOR(S): Bowen, A. J.; Inman, D. L. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Tech. Memo 19, 55 pp. DATE: 12/01/66 ABSTRACT: Detailed analysis of littoral processes affecting California coast between Pismo Beach and Santa Barbara. Sand budget based on transport rates of

significant littoral processes. Each process is examined to assess the sedimentary contributions (credits) and losses (debits). To balance sediment transport, the region is subdivided into five cells with boundaries at positions where sand has been estimated. Using basic data, a quantitative transport rate was determined for each process in each cell. Results are shown in graphic and tabular form. KEYWORDS: Coastal Processes, Geomorphology longshore transport, littoral sediment, dunes, California, South Central Region, Subregion VI, Subregion VII Sedimentary Facies and Trace Fossils in the Eocene Del Mar Formation and Torrey Sandstone, California AUTHOR(S): Boyer, J. E.; Warme, J. E. SOURCE: Paleogene Symp. and Selected Tech. Papers, Conf. of Future Energy Horizons of the Pac. Coast, D. W. Weaver, et al., Eds., AAPG-SEPM-SEG, Long Beach, California, pp. 65-98 DATE: 01/01/75 Detailed descriptions of the lithology and sediment types ABSTRACT: that make up the coastal cliffs north of Scripps pier. KEYWORDS: Geomorphology geology, maps, cliff sediment California, San Diego Region, Subregion X, Oceanside Cell Sediment Source Analysis and Sediment Deliver Analysis, Newport Bay Watershed, San Diego Crk. Stormwater Sedimentation Plan AUTHOR(S): Boyle Engineering Corporation SOURCE: Boyle Engineering Corporation, San Diego, California, 48 pp. DATE: 10/01/82 ABSTRACT: Sediment transport relations were developed from a regression analysis of USGS sediment gage records. Unsampled bedload was estimated with USGS equations. Estimate is for total sediment load. KEYWORDS: Hydrology & Hydraulics river sediment discharge, river-bed sediment, sedimentation, watershed sediment California, South Coast Region, Subregion IX, San Pedro Cell Erosion From Burned Watersheds in San Bernardino National Forest AUTHOR(S): Boyle, G. SOURCE: In: Symposium on Dynamics and Management of Mediterranean-Type Ecosystems, June 22-26, 1981, San Diego, Calif.; PSW and Range Exp. Sta., Berkeley, Calif., Gen. Tech. Rpt PSW-58, pp. 409-410 DATE: 06/01/82 ABSTRACT: Qualitative description of 1979 fire and subsequent 1980 flood in San Bernardino County. Gives some estimates of sediment transport and rainfall. KEYWORDS: Hydrology & Hydraulics

fires, storms/floods, watershed sediment, watersheds California, South Coast Region, Subregion IX, San Pedro Cell Tsunami Atlas for the Coasts of the United States AUTHOR(S): Brandsma, M.; Divoky, D.; Hwang, L. SOURCE: Tetra Tech, Inc., Pasadena, California; Nuclear Regulatory Commission, Wash., D. C., Divn. of Reactor Safety Research, Tech. Report No. TETRAT-TC-486, 255 pp. DATE: 11/01/79 This report presents the results of a study to determine the ABSTRACT: distribution of offshore wave heights and time histories for coastal segments of the United States due to distantly generated tsunamis. A large hypothetical earthquake is defined by appeal to history and tectonic theory. This canonical source serves as input to a numerical hydrodynamic model which computes the resulting wave history anywhere within the ocean basin, and is repeated for a number of potential source locations, chosen according to degree and type of seismic activity. In this way, hypothetical coastal histories of great tsunamis emanating from any potential source area are simulated. KEYWORDS: Coastal Processes tsunamis, wave climate, wave transformation California Selection of Optimum Plan for Reduction of Wave Action in Marina Del Rey, Venice, California AUTHOR(S): Brasfeild, C. W. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report No. 2-671, 50+ pp. DATE: 01/01/65 ABSTRACT: A 1:75-scale model, molded in concrete, was used to develop an optimum plan of improvement for reducing wave heights to a satisfactory level within the harbor of Marina Del Rey. The model reproduced the entire harbor and enough of adjacent Santa Monica Bay to allow propagation of the required test waves. It was concluded from test results that a 2325-ft-long, wingtype, offshore rubble-mound breakwater in front of the harbor entrance offered greater protection to the entire harbor area than any of the other plans tested. Other plans were not as efficient as the breakwater in reducing wave heights in the harbor entrance and main channel. KEYWORDS: Coastal Processes coastal structures, wave climate, wave transformation

California, South Coast Region, Subregion VIII, Santa Monica Cell U. S. Navy Ship Mooring Facility, West Coast of Point Loma, San Diego, California AUTHOR(S): Brasfeild, C. W.; Chatham, C. E. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report No. 2-708, 23 pp. DATE: 12/01/65 ABSTRACT: Tests were conducted on a 1:100-scale model to investigate various design elements of a proposed U. S. Navy ship mooring facility off the west coast of Point Loma. The model reproduced approximately 9000 ft. of the Point Loma shoreline and sufficient offshore area to allow generation of the required test waves. Includes data. KEYWORDS: Coastal Processes coastal structures, wave climate, wave transformation California, San Diego Region, Subregion X, Silver Strand Cell Expansion of Santa Barbara Harbor, California AUTHOR(S): Brasfeild, C. W.; Ball, J. W. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report No. 2-805, 23 pp. DATE: 12/01/67 ABSTRACT: Plans have been formulated to expand and improve the smallcraft harbor at Santa Barbara, California for pleasure craft, commer- cial fishing boats, and oil exploration boats use. The area that will be enclosed by а proposed breakwater system, and sufficient adjacent coastline and offshore bathymetry to permit accurate simulation of storm-wave action were reproduced in a 1:100-scale hydraulic model equipped with wave-generating and wavemeasuring devices. The model study would evaluate the effectiveness of various elements of the proposed design in providing protection from storm-wave action, and to develop a satisfactory plan of improvement with respect to wave-height criteria established for various portions of the harbor. The KEYWORDS: Coastal Processes, Hydrology & Hydraulics coastal structures, wave climate, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell Design Thunderstorm Hydrology, Los Angeles County AUTHOR(S): Bredehorst, R. E. Proc. Engineering Workshop on Urban Hydrology, California State SOURCE: University of Long Beach, ASCE, New York, pp. 136-150 DATE: 03/22/75 ABSTRACT: Analysis of thunderstorm rainfall data, giving relationship between

intensity, duration and frequency. Produced mathema- tical relationship for thunderstorm hydrology in Los Angeles County. Found that thunderstorm design was necessary only in Antelope and Santa Clara River valleys; in other areas fifty year storm curves exceed 50 year thuderstorm curves. KEYWORDS: Oceanography & Meteorology precipitation, storms/floods California, South Central Region, South Coast Region Study on a Significant Precipitation Episode in the Western United States AUTHOR(S): Brenner, I. S. SOURCE: Tech. Memo NWS WR-98, National Weather Service, Washington, D. C. DATE: 04/01/75 ABSTRACT: Synoptic study of an unusual storm (September 22 to October 3, 1974) which resulted in unforeseen rainfall on the California coast. Storm involved the merging of an inactive upper- tropospheric perturbation and an inactive, extra-tropical low. Within 24 hours a major storm developed, and brought rain to California. Includes data. KEYWORDS: Oceanography & Meteorology storms/floods, precipitation California Flood Hydrographs for San Diego Creek, Irvine, California AUTHOR(S): Brock, R. R. SOURCE: In: Proc. of a Engineering Workshop on Urban Hydrology, California State University at Long Beach; ASCE, New York, pp. 95-113 DATE: 03/22/75 ABSTRACT: Uses February 1969 data to construct a unit hydrograph for the San Diego Creek watershed. Maximum flow was a record 6700 cfs. Uses unit hydrograph to predict flood hydrographs for project floods. Discusses the effects of urbanization on the area. KEYWORDS: Hydrology & Hydraulics precipitation, storms/floods, urbanization, river discharge California, South Coast Region, Subregion IX, San Pedro Cell A Deeply-Buried Human Skull and Recent Stratigraphy at the Present Mouth of the San Gabriel River, Seal Beach, California AUTHOR(S): Brooks, S. T.; Conrey, B. L.; Dixon, K. A. SOURCE: Southern California Acadamy of Science Bulletin, Vol. 64, Part 4, pp. 229-241 DATE: 01/01/65 ABSTRACT: Half a mile inland from the present coastline, a human skull was

reported to have been imbedded 32 feet below present ground surface (16 feet, 3 inches below sea level). Exposed layers below recent fill show that after its deposition, there was an eustatic rise in sea level, coastal subsidence, or both, of at least 26 feet, accompanied by deposition, interrupted twice bv erosion, and finally a vertical shift of 10 feet by crustal movement. A C - 14date of about 1000 B.P. was obtained for the skull. KEYWORDS: Geomorphology geology, littoral sediment, neotectonics, sand bars California, South Coast Region, Subregion IX, San Pedro Cell Space and Time Relationships on Ventura County Beaches, California AUTHOR(S): Brown, A. J. SOURCE: Ph.D. Thesis, Geology Dept., University of California at Los Angeles, California, 163 pp. DATE: 01/01/83 ABSTRACT: Geomorphic changes at 8 sites on 4 beaches in Ventura County, California over 90 consecutive summer days of 1981. Includes 2 parallel profiles surveyed 100 meters apart for each beach, from berm to lower foreshore towards breaker zone. Wave height, period, type, and angle of approach, as well as width of surf zone and longshore current velocity and direction were measured. Sediment samples were collected. KEYWORDS: Coastal Processes, Geomorphology beaches, beach profiles, geomorphic processes, littoral sediment, longshore current, wave transformation California, South Central Region, Compilation of Eastern and Central North Pacific Tropical Cyclone Data AUTHOR(S): Brown, G. M.; Leftwich, P. W. U. S. Dept. of Commerce, NOAA Technical Memo 82080613, National SOURCE: Hurricane Center, Coral Gables, Florida, 21 pp. DATE: 01/01/82 A collection of data concerning tropical cyclones in the ABSTRACT: eastern and central north Pacific Oceans has been compiled at the National Hurricane Center. This data set consists of dates, tracks, maximum sustained wind speeds (as available), and limited central pressure values of tropical cyclones occurring from 1949 to 1980. KEYWORDS: Coastal Processes, Oceanography & Meteorology storms/floods, storm waves California, Oregon, Mexico Inland Control Structures AUTHOR(S): Brown, W. M.; Taylor, B. D. SOURCE: In: Sediment Management for Southern California Mountains,

Coastal

Plains and Shoreline; Cal Tech Environmental Quality Laboratory Report 17-D, Pasadena, California, pp. 1-26 DATE: 06/01/82 ABSTRACT: A catalog of control structures from Point Conception to the Mexican Border. Includes lists of structures, description of types, map of locations. Debris basin data from the Los Angeles County Flood Control District is included. KEYWORDS: Hydrology & Hydraulics precipitation, reservoirs, river discharge California, South Central Region, South Coast Region, San Diego Region, Subregion VII, Subregion IX, Subregion X, Subregion VIII Effects of Dams on Beach and Sand Supply AUTHOR(S): Brownlie, W. R.; Brown, W. R. SOURCE: Coastal Zone '78, Vol. I, ASCE, N. Y., pp. 2273-2287 DATE: 01/01/78 ABSTRACT: California Institute of Technology, Pasadena, and Scripps Institution of Oceanography, La Jolla, California study of 9 rivers to quantify beach-sized sediment delivery to shoreline annually from 1925 to 1975, and estimates of actual amounts delivered. Includes Ventura to Mexican border. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics river sediment discharge, beach nourishment/dredging, longshore transport, geomorphic processes, river-bed sediment California, South Central Region, South Coast Region, San Diego Region, Subregion VII, Subregion VIII, Subregion IX, Subregion X Sediment Management of Southern California Mountains, Coastal Plains and Shoreline-Part C, Coastal Sediment Delivery by Major Rivers in So. Calif. AUTHOR(S): Brownlie, W. R.; Taylor, B. D. SOURCE: Environmental Quality Lab., California Institute of Technology, Pasadena, California, EQL Report No. 17-C, 314 pp. DATE: 02/01/81 ABSTRACT: In 1975 a large-scale study of inland and coastal sedimentation processes in Southern California was initiated by CIT and the Center for Coastal Studies at Scripps Institution of Oceanography, La Jolla. This volume is one of a series of reports from that study. Using existing data bases, this series attempts to define inland and coastal sedimentation processes and identify effects of humans on these processes. KEYWORDS: Coastal Processes, Hydrology & Hydraulics river sediment discharge, sedimentation California, South Central Region, Coastal Sediment Delivery by Major Rivers in Southern California

AUTHOR(S): Brownlie, W. R.; Taylor, B. D.

SOURCE: In: Sediment Management for Southern California Mountains, Coastal Plains and Shoreline; Cal Tech Environmental Quality Laboratory Report 17-C, Pasadena, California, 314 pp. DATE: 02/01/81 ABSTRACT: Study area is from Point Conception to the Mexican Border. Moderately developed basins have good sediment delivery estimates. These estimates are for Ventura River, Santa Clara Calleguas Creek, Santa Margarita River, San Luis Rey River, San Dieguito River, San Diego River, and Tijuana River. KEYWORDS: Hydrology & Hydraulics reservoirs, river sediment discharge, urbanization, watershed sediment California, South Central Region, South Coast Region, San Diego Region, Subregion VII, Subregion VIII, Subregion IX, Subregion X Fire Loosened Sediment Menaces the City AUTHOR(S): Bruington, G. E. In: Symposium on Dynamics and Management of Mediterranean-SOURCE: Type Ecosystems, June 22-26, 1981; PSW Forest and Range Exp. Sta., Berkeley, California, Gen. Tech. Rpt. PSW-58, pp. 420-422 DATE: 06/01/82 ABSTRACT: Qualitative description of the fire-rain-flood cycle in Southern California. Experiences of the Los Angeles County Flood Control District are documented. Data on San Gabriel Dam and Reservoir, several Southern California floods. KEYWORDS: Hydrology & Hydraulics climatology, precipitation, reservoirs, storms/floods, fires California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, San Pedro Cell Longshore Transport at a Total Littoral Barrier AUTHOR(S): Bruno, R. O.; Gable, C. G. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Reprint 77-6, 10 pp. DATE: 07/01/77 ABSTRACT: Offshore breakwater and jetties at Channel Islands Harbor form an unique sand trap. The objective of this study is to re- evaluate the empirical relationship between nearshore wave thrust and longshore material transport. Total transport is measured. KEYWORDS: Coastal Processes coastal structures, sand entrapment, longshore transport, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell

Sediments Impounded by an Offshore Barrier

AUTHOR(S): Bruno, R. O.; Watts, G. M.; Gable, C. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Reprint 78-8, 20 pp. DATE: 02/01/78 ABSTRACT: The breakwater and entrance jetties for the Channel Islands Harbor in California form a total littoral barrier to longshore sand transprt. The sand impounded was monitored, patterns of sediment deposition are discussed, etc. Study determined whether deposition observed agrees with that predicted before construction. Size and shape of sediment examined. KEYWORDS: Coastal Processes coastal structures, sand entrapment, longshore transport California, South Central Region, Subregion VII, Santa Barbara Cell Longshore Sand Transport Study at Channel Islands Harbor, California AUTHOR(S): Bruno, R. O.; Dean, R. G.; Gable, C. G.; Walton, T. L. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Tech. Paper 81-2, 48 pp. DATE: 04/01/81 ABSTRACT: Provides an updated method for prediction of sand transport along beaches (littoral drift) obtained in a 2-year study at Channel Islands Harbor. California. Measurements were made by two near-bottom mounted pressure transducers and by visual observations to determine correlations between wave characteris- tics and longshore sediment transport. KEYWORDS: Coastal Processes longshore transport, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell Coastal Sand Management System AUTHOR(S): Brush, B. M. SOURCE: Proceedings of the 13th Coastal Engineering Conference July 10-14. 1972, Vancouver, B. C., ASCE, N. Y., pp. 1503-1513 DATE: 01/01/72 ABSTRACT: Interruption of sand transport is the most persistent worldwide coastal problem. Wave action produces sand transport which is not a problem in some areas but in others results in coastal erosion, obstruction of harbor entrances, and permanent loss of sand. Conflict between saving sand and bypassing it is caused by a lack of methods to manage this valuable resource. Separate elements of control have been used with varying degrees of success; now it is proposed to incorporate subsystems into an integrated system for management of the littoral transport. A coastal sand management system is to be

evaluated using three principal subsystems: (1) a mobile jet pump for use with a crater sink and fluidization accessories; (2) interlocking KEYWORDS: Coastal Processes longshore transport, littoral sediment, institutions/planning/mgmt. California, San Diego Region, Subregion X, Oceanside Cell Coastal Processes and Long Range Planning AUTHOR(S): Brush, B. M.; Inman, D. L. SOURCE: Marine Technology Society, 8th Annual Conference and Expo. Reprint, pp. 215-226 DATE: 01/01/72 ABSTRACT: The recent decade has produced new insights into the physical processes of the coastal zone which are of value to policy making as well as to science. These developments now enable remedial methods to be undertaken. This includes existing technology, adaptable methods, and practical future design for retarding the potentially irreversible loss of priceless coastal features. A review of the scope of the interference of manmade works shows that to deal with a coastal problem one must consider all of the factors concerned. KEYWORDS: Coastal Processes, Socioeconomics institutions/planning/mgmt. California, Oregon, South Central Region, Coast Erosion and the Develoment of Beach Profiles AUTHOR(S): Bruun, P. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Beach, Washington, D. C., BEB Tech. Memo 44 DATE: 06/01/54 ABSTRACT: The first part of paper is a study of Danish North Sea Coast. The second part consisted of a study of Mission Bay, California area, including a study of the development of beach profiles with comparison for different wave conditions, seasonal fluctuations of profiles, and comparison of Danish and California data. KEYWORDS: Coastal Processes beach profiles, wave transformation California, San Diego Region, Subregion X, Mission Bay Cell Runup Characteristics of Explosion-Generated Waves in Major Harbor Areas, Report 2 AUTHOR(S): Bucci, D. R.; Whalin, R. W. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report N-69-4, 86 pp. DATE: 09/01/70 ABSTRACT: Methodology for conducting runup tests in a distorted model for wave

intrusion into San Diego Bay, California. KEYWORDS: Coastal Processes wave transformation, institutions/planning/mgmt. California, San Diego Region, Subregion X, Silver Strand Cell Gullied Submarine Slopes Off Southern California AUTHOR(S): Buffington, E. C. SOURCE: Geologic Society of America Bulletin, Vol. 62, p. 1497 DATE: 01/01/51 ABSTRACT: Abstract; sea gullies differ in many respects from the much discussed submarine canyons, but a genetic relationship is possible and is discussed. It is believed that the sea gullies are of marine origin; possible modes are discussed, including formation by erosion or by differential deposition. Special attention is given to the idea of erosion by turbidity currents. KEYWORDS: Geomorphology geomorphic processes, submarine canyons California, San Diego Region, Subregion X Flood of March 2, 1938 AUTHOR(S): Burke, M. F. SOURCE: Los Angeles County Flood Control District, Unpublished report, Los Angeles, California, 52+ pp. DATE: 05/20/38 ABSTRACT: Report on the 1938 storm and flood. Includes detailed synoptic description of the storm, descriptions of rainfall patterns, and discussion of runoff and debris measurements. Text followed by data and illustrations, including isohyetal maps, maximum one hour rainfall, twenty-four hour rainfall, operation records of dams, mass curves of rainfall, peak flow data, tables of of runoff, and siltation data. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, river sediment discharge, storms/floods California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, San Pedro Cell Report on Floods of January 15-18, 1952 AUTHOR(S): Burke, M. F. SOURCE: Los Angeles County Food Control District, Unpublished Report, Los Angeles, California, 20 pp. DATE: 09/01/52 ABSTRACT: Meteorology and description of storm, including storm tracks. Includes tables on rainfall, peak flows, dam operations and debris. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, river sediment discharge, storms/floods California, South Coast Region, Subregion VIII, Subregion VIII, Santa Monica Cell, San Pedro Cell

Report on Storm of January 25-26, 1956 AUTHOR(S): Burke, M. F. SOURCE: Los Angeles County Flood Control District, Unpublished Report, Los Angeles, California, 17+ pp. DATE: 05/01/56 ABSTRACT: Precipitation data and meteorological conditions relating to an intense storm. Storm was unusual in that most rain fell in the south and southwest areas with very little in the mountains. Includes Los Angeles County rainfall data, mass curves, runoff and debris data (relatively small amount of debris due to weather patterns). KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, storms/floods, watershed sediment California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, San Pedro Cell Characteristic Weather Phenomena of California AUTHOR(S): Byers, H. R. MIT Meteorological Papers, Vol. 1, No. 2, Massachusetts SOURCE: Institute of Technology, Cambridge DATE: 01/01/31 An overview of California weather conditions. Report ABSTRACT: discusses marine layer, and has a general description of Pacific weather patterns which affect the coast, and an account of weather patterns, especially for the historical perspective. Includes data from 1929, Southern and Central California. KEYWORDS: Oceanography & Meteorology climatology California The Air Masses of the North Pacific AUTHOR(S): Byers, H. R. Bulletin of the Scripps Institution of Oceanography of the SOURCE: University of California, La Jolla, California, Technical Series Berkeley, California, Vol. 3, No. 14, pp. 311-354 DATE: 01/01/34 ABSTRACT: A description of weather types: over the North Pacific and their relationship to California weather. Concentrates on weather data around 1930 (data are sparse) and presents several weather charts showing the movement of fronts in the Pacific. It is of limited value from a data point of view, but of interest from historical and descriptive angles. KEYWORDS: Oceanography & Meteorology climatology

California, South Central Region, South Coast Region, San Diego Region Fossil Charcoal from Varved Sediments in the Santa Barbara Channel, an Index of Wildfire Frequencies in the Los Padres Nat'l Forest (735-1520 AD) AUTHOR(S): Byrne, R. SOURCE: Report No. PSW-47, Pacific Southwest Forest and Range Experiment Station, Berkeley, California, 70+ pp. DATE: 10/05/79 ABSTRACT: Examined fossil charcoal and pollen to establish fire frequen- cies in Santa Barbara area. Provides technical details. Found that major fires occured once ever 65 years on the average; inland fires occured every 30 to 35 years. Relates 30 year preiod to rainfall patterns from tree-ring data. No evidence is found that fires were frequent low intensity events; conflagration type fires appear to be the naturally occuring ones, especially in coastal areas. Pollen data indicates that there has been no expansion of chapparral since development. KEYWORDS: Hydrology & Hydraulics fires, watersheds California, South Central Region, Subregion VI, Subregion VII, Santa Ynez River Cell, Santa Barbara Cell Wave Action and Sand Movement Near Anaheim Bay, California AUTHOR(S): Caldwell, J. M. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D.C., BEB Tech. Memo. 68 DATE: 02/01/56 ABSTRACT: A study to determine the degree to which alongshore sand movement on the beach and offshore bottom can be correlated with characteristics of ocean waves impinging on the beach. Field data were collected in connection with a beach fill operation for shore protection immediately south of Anaheim Bay jetties. Analyses are made of wave energy, sand characteristics and volumetric changes. An approximate relationship for net alongshore sand movement in cubic yards per day in terms of intensity of net alongshore wave energy is worked out. KEYWORDS: Coastal Processes longshore transport, offshore/onshore transport, wave transformation California, South Coast Region, Subregion IX, San Pedro Cell

Staff Report and Recommendations on Consistency Determination, Camp Pendleton

Marine Corps Base AUTHOR(S): California Coastal Commission SOURCE: CD-22-82, California Coastal Commission, San Francisco, Calif., 22 pp. DATE: 07/21/83 ABSTRACT: A consistency determination of a plan to construct and operate a Landing Craft Air Cushion (LCAC) Operational Base. KEYWORDS: Coastal Processes coastal structures, shoreline use, environmental constraints, institutions/planning/mgmt. California, San Diego Region, Subregion X, Oceanside Cell California Coastal Plan AUTHOR(S): California Coastal Zone Cons. Comm. State of California Coastal Commission, San Francisco, Calif. SOURCE: 443 pp. DATE: 12/01/75 A coastal plan to achieve long-term protection and ABSTRACT: productivity of coastal resources. Includes plan maps and regional data. KEYWORDS: Coastal Processes, Socioeconomics institutions/planning/mgmt., maps, shoreline use, coastal erosion problems, urbanization, population California, South Central Region, South Coast Region, San Diego Region Comprehensive Framework Study, California Region, Appendices V and IX -Water Resources and Flood Control AUTHOR(S): California Region Framework Study Committee SOURCE: For: PSW Inter-Agency Committee, Water Resources Council; California Region Framework Study Committe, 169+ pp. DATE: 05/01/72 ABSTRACT: Overview of water and flood problems in California. Includes maps of province boundaries for selected stream gages, overall water supply runoff data, flood areas and flood projects, and precipitation summaries. KEYWORDS: Hydrology & Hydraulics precipitation, river discharge, watersheds California, Carmel River Cell, South Central Region, South Coast Region, San Diego Region Tsunami Hazards AUTHOR(S): California State Dept. of Conservation SOURCE: State of California Dept. of Conservation, Sacramento, California, Seismic Safety Information #72-5 DATE: 01/01/72 ABSTRACT: not reviewed KEYWORDS: Coastal Processes tsunamis California

Comprehensive Ocean Area Plan Shoreline Use and Protection, Appendix VII AUTHOR(S): California State Dept. of Nav. & Ocean Dev. SOURCE: Dept. of Navigation and Ocean Development, State of California, Sacramento DATE: 03/01/72 ABSTRACT: not reviewed KEYWORDS: Coastal Processes shoreline use, shore protection California Shore Protection in California AUTHOR(S): California State Dept. of Nav. & Ocean Dev. SOURCE: Dept. of Navigation and Ocean Development, Resources Agency, State of California, Sacramento, 51 pp. DATE: 04/01/76 ABSTRACT: Report is to further a public understanding of the shoreline erosion problems along the California coast. Gives a brief description of the forces of nature that form the beaches and erode the bluffs, the effect man has on the process, and the means available for correctible action. KEYWORDS: Coastal Processes, Socioeconomics coastal erosion problems, environmental constraints, institutions/planning/mgmt. California Assessment and Atlas of Shoreline Erosion Along the California Coast AUTHOR(S): California State Dept. of Nav. & Ocean Dev. SOURCE: Dept. of Navigation and Ocean Development, The Resources Agency, State of California, Sacramento, 69 pp. DATE: 07/01/77 ABSTRACT: An atlas which assesses the condition of the coastline. The erosion problem is shown in graphic form, pictures and maps. The report/atlas indentifies the nature of the entire coastline and those sections of the coast that are at present subject to damage from erosion. The report is based on a mile-by-mile review of conditions. KEYWORDS: Coastal Processes, Geomorphology coastal erosion problems, beaches, geomorphic processes, shore protection, shoreline changes California, South Central Region, South Coast Region, San Diego Region Study of Beach Nourishment Along the Southern California Coastline AUTHOR(S): California State Dept. of Nav. & Ocean Dev. SOURCE: Dept. of Navigation and Ocean Development, The Resources Agency, State of California, Sacramento, Calif. 150 pp. DATE: 10/01/77 ABSTRACT: A planning study of beach nourishment and beach erosion control.

Objectives of this investigation were to develop an effective and economical plan for replenishing the beaches in Southern California with material from land and offshore sources. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal erosion, mining, shore protection California, South Central Region, South Coast Region, San Diego Region Land Use Within the California Coastal Zone AUTHOR(S): California State Dept. of Water Res. SOURCE: Bulletin 207, State of California, Department of Water Resources Sacramento, California, 181 pp. DATE: 10/01/78 Presents land use data, and dates of the surveys for the ABSTRACT: coastal zone from 1962 to 1975. Contains 161 land use maps. KEYWORDS: Coastal Processes, Socioeconomics growth potential/recreation, shoreline use, urbanization California, South Central Region, South Coast Region, San Diego Region Interim Report on Study of Beach Nourishment Along Southern California Coastline AUTHOR(S): California State Dept. of Water Res., So. District SOURCE: Dept. of Water Resources, The Resources Agency, State of California, Sacramento, Memorandum Report, 40 pp. DATE: 07/01/69 ABSTRACT: Presents the progress that has been made to date in a study of beach nourishment along the Southern California coast. The overall study is concerned with a determination of the amount of natural nourishment provided by coastal streams, and development of an effective and economically feasible plan for supplement- ing with imported beach material where necessary. Includes data. KEYWORDS: Coastal Processes, Hydrology & Hydraulics beach nourishment/dredging, river sediment discharge, institutions/planning/mgmt., watershed sediment California, South Central Region, Underwater Parks Master Plan AUTHOR(S): California State Park System SOURCE: State of California, Resources Agency, Department of Parks and Recreation, Sacramento, California, 32 pp. DATE: 05/01/79 ABSTRACT: Explanation of the underwater parks program emphasizing natural resources in coastal and inland waters, underwater recreational opportunities, and preservation of scenic and cultural underwater resources. KEYWORDS: Coastal Processes, Socioeconomics growth potential/recreation, institutions/planning/mgmt., shoreline use California

Beach Erosion Project, San Diego (Sunset Cliffs), California AUTHOR(S): California State Resources Agency SOURCE: The Resources Agency, State of California, Sacramento, California, 16 pp. DATE: 01/01/66 ABSTRACT: Comments of the State of California on a report by the Chief of Engineers, Department of the Army, regarding the proposed title project. KEYWORDS: Coastal Processes institutions/planning/mgmt. California, San Diego Region, Subregion X, S. Mission Bay Reach California Public Outdoor Recreation Plan AUTHOR(S): California State, P. O. R. P. Comm. SOURCE: State of California Public Outdoor Recreation Plan Committee, Sacramento, California, Part I - 81 pp., Part II (Publ. 6/60) - 204 pp. DATE: 03/25/60 ABSTRACT: This report in two parts presents California's recreation needs, availability, and recommendations for making recreation opportunities available. Major outdoor recreation interests and activities are presented in map, table, chart, and text forms. KEYWORDS: Coastal Processes, Socioeconomics growth potential/recreation, institutions/planning/mgmt., population, property value/land use, shoreline use, urbanization California California and Use of the Ocean, A Planning Study of Marine Resources, La Jolla AUTHOR(S): California, University of IMR Reference 65-21, University of California at San Diego, La SOURCE: Jolla, California, pp. 1-1 to 19-22 DATE: 10/01/65 ABSTRACT: Broadly reviews the relationship of the sea and its resources to the State of California and the role of these resources in the State's development primarily between 1965-1980. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics population, urbanization, climatology, growth potential/recreation, institutions/planning/mgmt. California, South Central Region, South Coast Region, San Diego Region Soil Slips, Debris Flows and Rainstorms in the Santa Monica Mountains, Southern California AUTHOR(S): Campbell, R. H. SOURCE: U. S. Geological Survey Professional Paper No. 851, U. S. Department of the Interior, Washington, D. C., 51 pp. DATE: 01/01/75

ABSTRACT: Covers period of 1962 to 1971. Considers soil slips and debris flows for several large storms including 1962, 1965 and 1969. Includes precipitation data and fire effects. KEYWORDS: Hydrology & Hydraulics fires, precipitation, watershed sediment California, South Coast Region, Subregion VIII, Santa Monica Cell Soil Slips, Debris Flows, and Rainstorms in the Santa Monica Mountains and Vicinity, Southern California, Los Angeles, California AUTHOR(S): Campbell, R. H. SOURCE: In: Field Guide to Selected Engineering Geologic Features, Santa Monica Mountains, J. R. Keaton, Ed., Assoc. of Engr. Geol. Southern California Section, Los Angeles, Calif., pp. 26-38 DATE: 05/19/79 ABSTRACT: Large landslides and soil slips are mapped and described. KEYWORDS: Geomorphology geology, geomorphic processes, maps California, South Coast Region, Subregion VIII, Santa Monica Cell El Nino's Ill Wind AUTHOR(S): Canby, T. Y. SOURCE: National Geographic, Vol. 165, No. 2, pp. 144-183 DATE: 01/02/84 ABSTRACT: Discusses the effects of the El Nino (periodic heating of the equatorial Pacific Ocean) on weather patterns throughout the world and the consequent damage to crops, property, and lives. Discussion of coastal storm damage along the California coast is included. KEYWORDS: Coastal Processes climatology, coastal erosion, El Nino, storm damage, storms/floods, wave climate California Fluctuations from the Normal Temperature and Precipitation at Los Angeles. California During the Year 1913 AUTHOR(S): Carpenter, F. A. SOURCE: Bulletin of the Southern California Academy of Sciences, Vol. 13 No. 1 DATE: 01/01/14 ABSTRACT: Includes weather maps (none offshore) and descriptions of meteorological conditions which produced extremely cold and rainy weather in Southern California. Also includes rainfall data, as well as temperature records. KEYWORDS: Oceanography & Meteorology climatology, precipitation California, South Coast Region, Subregion VIII, Subregion IX Flood Studies at Los Angeles from November 1, 1877 to January 1, 1920 AUTHOR(S): Carpenter, F. A.

SOURCE: Los Angeles Chamber of Commerce, Deptartment of Meteorology and

Aeronautics, Los Angeles, California DATE: 01/09/20 ABSTRACT: Incudes rainfall data and flood descriptions from 1877 to 1920 in Los Angeles. Mostly qualitative on runoff (light, moderate, bridge washed away, etc.) but reports some twenty-four hour rainfall measurements and gives hourly totals on 1914 storm. KEYWORDS: Oceanography & Meteorology precipitation California, South Coast Region, Subregion VIII, Subregion IX A Winter Storm at Los Angeles, California AUTHOR(S): Carr, J. A. SOURCE: Monthly Weather Review, Vol. 80, No. 1, pp. 10-13 DATE: 01/01/52 ABSTRACT: Circulation patterns, 500 mb charts, 200 mb charts and surface charts are used to document a severe January 1952 storm in Los Angeles. Storm brought 7.4 inches of rain in three days, resulted in flooding. Includes reference for documenting storm patterns related to a significant flood. KEYWORDS: Oceanography & Meteorology climatology, storms/floods California, South Coast Region, Subregion VIII, Subregion IX Shelf Currents Off Southern California AUTHOR(S): Carsola, A. J. SOURCE: Proceedings - Coastal Zone Management and the West State Future, W. B. Merselis, Ed., Marine Technology Society, pp. 84-102 DATE: 01/01/73 ABSTRACT: not reviewed KEYWORDS: Coastal Processes longshore current, coastal currents California, South Central Region, South Coast Region, San Diego Region Longshore Sand Transport Report, February 1978 through December 1981 AUTHOR(S): Castel, D.; Seymour, R. J. SOURCE: Nearshore Research Group, University of Calif. Institute of Marine Resources, Scripps Institution of Oceanography, La Jolla, California, 216 pp. DATE: 01/01/82 ABSTRACT: Collection of wave and other coastal data under an on-going coastal data information program. Includes Santa Barbara, Sunset Beach, Oceanside, and Mission Bay. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Geologic Map of the Baldwin Hills Area, California AUTHOR(S): Castle, R. O.

SOURCE: Open File Map 69-72, U. S. Dept. of Interior, Geological Survey, Menlo Park, California DATE: 01/01/60 ABSTRACT: Geologic map, scale 1:12,000. KEYWORDS: Geomorphology geology, maps California, South Coast Region, Subregion VIII, Santa Monica Cell Geologic Map of Beverly Hills and Venice Quadrangles - Surficial Geology AUTHOR(S): Castle, R. O. SOURCE: Open File Map 60-26, U. S. Dept. of Interior, Geological Survey, Reston, Virginia DATE: 01/01/60 ABSTRACT: Geologic map, scale 1:12,000. KEYWORDS: Geomorphology geology, maps California, South Coast Region, Subregion VIII, Santa Monica Cell Prelim. Study of the Geology at Two Proposed Sites for a Nuclear Powered Desalting Plant Near Sunset Beach and Pelican Point, Orange County, Calif. AUTHOR(S): Castle, R. O. SOURCE: U. S. Dept. of Interior, Geological Survey Open File Report to U. S. Atomic Energy Commission, 73 pp. DATE: 01/01/66 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geology California, South Coast Region, Subregion IX, San Pedro Cell Cumulative Socioeconomic Impacts of Oil and Gas Development in the Santa Barbara Channel Region: A Case Study AUTHOR(S): Centaur Associates, Inc. SOURCE: Funded by the U. S. Dept. of Interior, Minerals Management Service, Pacific OCS Region., Contract No. 14-12-0001-30026, Centaur Associates, Inc., Washington, D. C., 307 pp. DATE: 08/01/84 ABSTRACT: This report is a retrospective case study of the effects of offshore oil and gas development on the socioeconomic environ- ment of Santa Barbara and Ventura Counties. The study was con- ducted primarily using secondary sources. The report contains profiles of about 60 socioeconomic characteristics for each of the two Counties. Estimates of the actual effects of offshore oil and gas development in federal and state waters on selected characteristics of the two Counties were made. Tests of the applicability of these results to other coastal California counties were made. The regression results were found to

hold KEYWORDS: Coastal Processes, Socioeconomics population, growth potential/recreation, beaches, shoreline use, institutions/planning/mgmt. California, South Central Region, Subregion VI, Subregion VII, S. Santa Maria National Shoreline Study - Shore Management Guidelines AUTHOR(S): Center for the Environment and Man, Inc. SOURCE: Contract DACW 73-71-C-0037, June 1971; U. S. Army Corps of Engineers, Washington, D. C., 56 pp. DATE: 08/01/71 ABSTRACT: This report (one of twelve related reports) describes typical erosion control measures and presents examples of shore protection facilities, and presents criteria for planning shore protection. KEYWORDS: Coastal Processes coastal structures, shore protection, institutions/planning/mgmt. California, San Diego Region, Subregion X, Mission Bay Cell Mechanics of Mass Sediment Transport in Scripps Submarine Canyon AUTHOR(S): Chamberlain, T. K. Ph.D. Dissertation in Oceanography, Scripps Institution of SOURCE: Oceanography, Univ. of Calif. at San Diego, La Jolla, Calif., 200 pp. DATE: 01/01/60 ABSTRACT: not reviewed KEYWORDS: Coastal Processes offshore/onshore transport, submarine canyons California, San Diego Region, Subregion X, Oceanside Cell Mass Transport of Sediments in Head of Scripps Submarine Canyon, California AUTHOR(S): Chamberlain, T. K. SOURCE: Papers in Marine Geology, Shepard Commemorative Volume, R. I. Miller, Ed., Macmillan & Co., N. Y., pp. 42-64 DATE: 01/01/64 ABSTRACT: During this investigation, field data were obtained from reconnaissances, and measurements were accomplished below the ocean surface by means of SCUBA. For measurements of the fluctuations of sediment volumes in the deeper portions of the canyon heads, steel cables were strung at rim level from wall to wall in both the South and Sumner Branches. Fluctua- tions in sediment level of 6 inches were easily recognized and correlated with sediment fluctuations recorded by echo-sounding equipment in the shallow portions of the canyon heads. KEYWORDS: Coastal Processes, Geomorphology submarine canyons, offshore/onshore transport, California, San Diego Region, Subregion X, Oceanside Cell Flood Plain Sedimentation and Erosion, Phase IV, Methods for Evaluation

of

Sedimentation and Erosion in the Flood Plains of San Diego County AUTHOR(S): Chang, H. H. SOURCE: County of San Diego Department of Sanitation and Flood Control, 77 pp. DATE: 07/01/74 ABSTRACT: DELTA computer program set up for the San Dieguito, San Marcos, and Escondido Creek estuaries. Sediment estimates are given for the 100 year flood only. KEYWORDS: Hydrology & Hydraulics river sediment discharge, estuarine sediment storage, sedimentation, watershed sediment California, South Coast Region, Subregion X, Oceanside Cell Estimation of Sand Influx into the Ocean, Erosion of Entrance Channel, Simplified Computer Program for Water Surface Profiles AUTHOR(S): Chang, H. H. SOURCE: County of San Diego, Dept. of Sanitation and Flood Control, San Diego, California, 87 PP. DATE: 01/01/75 Study consists of estimation of the sand influx from the San ABSTRACT: Dieguito River into the ocean from a flood channel, erosion of the entrance channel by lagoon outflow to the ocean, and a simplified computer program for water surface profiles. The entrance channel studied was in the San Elijo Lagoon. Mean annual sand influx to the ocean from the San Dieguito River is 67,200 cubic yards per year. The computer program LAGOON was used to analyze a proposed entrance channel to San Elijo Lagoon. KEYWORDS: Hydrology & Hydraulics, Coastal Processes estuarine sediment storage, river sediment discharge California, San Diego Region, Subregion X Estimation of Sand Influx into the Ocean, Erosion of Entrance Channel, Simplified Computer Program for Water Surface Profiles AUTHOR(S): Chanq, H. H. SOURCE: County of San Diego, Dept. of Sanitation and Flood Control, San Diego, California, 87 PP. DATE: 01/01/75 ABSTRACT: Study consists of estimation of the sand influx from the San Dieguito River into the ocean from a flood channel, erosion of the entrance channel by lagoon outflow to the ocean, and a simplified computer program for water surface profiles. The entrance channel studied was in the San Elijo Lagoon. Mean annual sand influx to the ocean from the San Dieguito River is 67,200 cubic yards per year. The computer program LAGOON was used to analyze a proposed entrance channel to San Elijo Lagoon. KEYWORDS: Hydrology & Hydraulics, Coastal Processes

estuarine sediment storage, river sediment discharge California, San Diego Region, Subregion X Flood Plain Sedimentation and Erosion, Phase VI AUTHOR(S): Chang, H. H. SOURCE: County of San Diego Department of Sanitation and Flood Control, 78 pp. DATE: 07/01/75 ABSTRACT: The computer program STREAM is used to analyze sediment transport for the San Luis Rey River. No average annual discharges published. KEYWORDS: Hydrology & Hydraulics river sediment discharge, river discharge California, San Diego Region, Subregion X, Oceanside Cell Modeling of River Channel Changes AUTHOR(S): Chang. H. H. SOURCE: ASCE, Journal of Hydraulic Engineering, Vol. 110, No. 2, pp. 157-172 DATE: 01/02/84 ABSTRACT: A computer based flood and sediment routing model which simulates river channel changes is described together with a case study of the San Dieguito River Model which is called Fluvial II. No estimate of average annual discharge given. KEYWORDS: Hydrology & Hydraulics river sediment discharge, river discharge California, San Diego Region, Subregion X, Oceanside Cell Design for Expansion of Port San Luis, California AUTHOR(S): Chatham, C. E.; Brasfeild, C. W. U. S. Army Corps of Engineers, Waterways Experiment Station, SOURCE: Vicksburg, Miss., WES Tech. Report H-69-6, 22 pp. DATE: 04/01/69 ABSTRACT: A model of Port San Luis (formerly known as San Luis Obispo Harbor), and sufficient offshore area to permit generation of the required test waves, was used to investigate the arrangement and design of certain proposed harbor improvements with respect to wave action. Includes data. KEYWORDS: Coastal Processes, Hydrology & Hydraulics coastal structures, wave climate, wave transformation California, South Central Region, Subregion VI, Morro Bay Cell Study of Beach Widening by the Perched Beach Concept, Santa Monica Bay, California AUTHOR(S): Chatham, C. E.; Davidson, D. D.; Whalin, R. W. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report H-73-8, 100 pp. DATE: 06/01/73 ABSTRACT: Hydraulic model studies were conducted to aid in determining the technical feasibility and optimum design factors of the perched beach concept

for widening the existing beach to provide right- of-way for a freeway along a portion of the Santa Monica Bay coastline. During the course of the model studies, the California Legislature deleted this section of the freeway from the California Freeway and Expressway System. As a result, the Division of Highways terminated their freeway location project and canceled further model testing, and only part of the studies was completed. Includes test data. KEYWORDS: Coastal Processes beaches, coastal structures, wave climate, wave transformation California, South Coast Region, Subregion VIII, Santa Monica Cell Beach Sand Radioactivity, Source, Transportation and Deposition Studies AUTHOR(S): Cherry, John; et al. University of California, Hydraulic Engineering Lab., Berkeley, SOURCE: California, Tech. Report HEL 5-2 DATE: 07/01/63 ABSTRACT: not reviewed KEYWORDS: Coastal Processes littoral sediment, longshore transport California Low-Cost Measurements of Shoreline Change AUTHOR(S): Clancy, R. M.; Camfield, F. E.; Schneider, C. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Reprint 83-11, pp. 717-726 DATE: 05/01/83 ABSTRACT: Since July 1977, periodic low-cost measurements of beach berm widths have been made at 25 stations along a 15.2 mile reach of shoreline in Southern California. Measurements provide estimates of longshore sediment transport. Comparisons between estimated longshore sediment transport and the measured changes in beach berm width are included. KEYWORDS: Coastal Processes beaches, longshore transport, offshore/onshore transport, shoreline changes California, South Central Region, South Coast Region, San Diego Region Reconnaissance Geology and Geologic Hazards of Selected Areas of the Southern California Continental Borderland Considered for OCS Petr Lease Sale 48 AUTHOR(S): Clarke, S. H.; et al. SOURCE: U. S. Dept. of Interior, Geologic Survey/Minerals Management Service (MMS), 75 pp. DATE: 07/01/82 ABSTRACT: This report addresses geological hazards present in and around Gulf of Santa Catalina, northern part of Santa Rosa-Cortes Ridge and the westernmost

Santa Barbara Channel offshore from Point Conception. These areas are within the borderland that includes most of the tracts proposed for oil leasing in OCS sale 48. KEYWORDS: Coastal Processes tsunamis, offshore/onshore transport, neotectonics, sedimentation California, South Central Region, South Coast Region, San Diego Region, Subregion VII, Seismic Activity and Typography of the Sea Floor Off Southern California AUTHOR(S): Clements, T.; Emery, K. O. SOURCE: Seismological Society of America Bulletin 37, pp. 307-313 DATE: 01/01/47 ABSTRACT: not reviewed KEYWORDS: Coastal Processes neotectonics California, South Central Region, South Coast Region, San Diego Region Geologic Map of the Northeast Part of the Palos Verdes Hills, Los Angeles County, California AUTHOR(S): Cleveland, G. B. Map Sheet 27, California Division of Mines and Geology, SOURCE: Sacramento, California DATE: 01/01/76 ABSTRACT: Geologic map, scale 1:12,000. KEYWORDS: Geomorphology geology, maps California, South Coast Region, Subregion VIII, Santa Monica Cell Geology at the Shoreline, Topanga Beach, Los Angeles AUTHOR(S): Cleveland, G. B. SOURCE: California Geology, Vol. 30, No.8, pp. 171-174 DATE: 08/01/77 A site study of geologic and shoreline processes was made at ABSTRACT: Topanga Beach State Park. The Park is a one-mile-long strip of beach that lies along State Highway 1, extending from the Los Angeles City boundary westward to just beyond the mouth of Topanga Creek on the south edge of the Santa Monica Mountains. The physical setting of the beach is described. The general geology of the area is shown on a geologic map. KEYWORDS: Coastal Processes, Geomorphology geology, shoreline changes California, South Coast Region, Subregion VIII, Santa Monica Cell Engineering Report: Tethered Float Breakwater Near-Shore Ocean Model AUTHOR(S): Clinkenbeard, J. D. SOURCE: Report No. NOSC/TR-378, Naval Ocean Systems Center, San Diego, California, 164 pp. DATE: 09/01/78 ABSTRACT: Describes the efforts at Naval Ocean Systems Center to design,

fabricate and evaluate the Tethered Float Breakwater (TFB) Near-Shore Ocean Model, and to supply all basic engineering information from functional concept to on-site emplacement of a full- scale model. Preliminary experiments bv Scripps Institu- tion of Oceanography established that cylindrical tethered floats in a particular breakwater geometry, would provide an optimum wave height reduction of up to 50 percent for a shallow- water, nearshore application. Fabrication proceeded on two TFB modules including floats, tethers and ballast assembly, and interim tests and evaluation of ballasting, surfacing and towing KEYWORDS: Coastal Processes coastal structures, wave climate, wave transformation California, San Diego Region Debris Flows and Landslides, City of Los Angeles AUTHOR(S): Cobarrubias, J. W. SOURCE: Field Guide to Selected Engineering Geologic Features, Santa Monica Mountains, J. R. Keaton, Ed., Assoc. of Engr. Geol., Southern Calif. Section, Los Angeles, Calif., pp. 19-25 DATE: 05/19/79 ABSTRACT: Rain fall is correlated with various types of slope failure. Bedding plane failures were the most destructive failure type. KEYWORDS: Geomorphology geology, geomorphic processes California, South Coast Region, Subregion VIII, Santa Monica Cell Heavy Mineral Zones in the Modelo Formation of the Santa Monica Mountains, California AUTHOR(S): Cogen, W. M. SOURCE: Journal of Sed. Pet., Vol. 6, No. 1, pp. 3-15 DATE: 04/01/36 ABSTRACT: A detailed heavy mineral study was made of a portion of the Modelo formation in the Santa Monica Mountains near Los Angeles. It was found that the heavy minerals varied both vertically in the formation and laterally within single lithologic units. Four distinct mineral zones were recognized. KEYWORDS: Geomorphology geology, grain size, maps, petrology California, South Coast Region, Subregion VIII, Santa Monica Cell Sediments of the Submarine Canyons of the California Coast AUTHOR(S): Cohee, G. V. SOURCE: Journal of Sedimentary Petrology, Vol. 8, pp. 19-32 DATE: 01/01/38 ABSTRACT: Report describes sediments in the submarine canyons off the

California coast. They are characterized as sand, mostly fine with an abundance of silt and some clay, generally very well sorted. There are variations in median grain sizes, but grain size does not necessarily decrease with increasing depth. KEYWORDS: Coastal Processes, Geomorphology sedimentation, submarine canyons, geology, geomorphic processes, grain size California, Oregon, South Coast Region, San Diego Region Fire and Water in Southern California's Mountains AUTHOR(S): Colman, E. A. SOURCE: Misc. Paper No. 5, U. S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station, Berkeley, California, 5 pp. DATE: 06/25/53 ABSTRACT: Gives an overview of fire-flood cycles in Southern California. Points out several fire related floods (pre 1953, as far back as the 1930's) as well as several fires which did not result in floods. Includes data. KEYWORDS: Hydrology & Hydraulics fires, storms/floods California, South Central Region, South Coast Region, San Diego Region The Occurrence and Geologic Work of Rip Currents off Southern California AUTHOR(S): Cook, D. O. SOURCE: Marine Geology, Vol. 9, No. 3, pp. 173-186 DATE: 01/01/70 ABSTRACT: not reviewed KEYWORDS: Coastal Processes geomorphic processes, nearshore currents California, South Central Region, South Coast Region, San Diego Region Coastal Dunes of California AUTHOR(S): Cooper, W. S. SOURCE: Memoir 104, Geol. Soc. of Amer., 125 pp. DATE: 01/01/67 ABSTRACT: Twenty-seven dune localities were investigated on the coast of California and five in northern Baja California. Special field study was given to two dune areas, Monterey Bay and Santa Maria River, because of their great extent and variety of features. Includes data. KEYWORDS: Geomorphology, Coastal Processes climatology, dunes, geomorphic processes, sand entrapment, wind transport California, Mexico, South Central Region, South Coast Region, San Diego Region, Subregion VI, Santa Maria River Cell Wave Information Study for U. S. Coastlines Report 1, Surface Pressure

Field

Reconstruction for Wave Hindcasting AUTHOR(S): Corson, W. D.; Resio, D. T.; Vincent, C. L. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report HL-80-11, 26 pp. DATE: 07/01/80 ABSTRACT: This report describes the procedures used in preparing surface pressure field data for numerical wave hindcasting purposes. Two sources of sea-level pressure data were used to develop a valid pressure field for wave hindcasting purposes. Reconstruc- tion of a 20-year record of wind fields over Atlantic and Pacific included. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation, storm waves, climatology California, Oregon, Mexico Sea Cliff Erosion, Isla Vista, California AUTHOR(S): Cottonaro, W. F. SOURCE: California Geology, Calif. Division of Mines and Geology, Sacramento, California, Vol. 28, No. 6, pp. 140-143 DATE: 06/01/75 Measurement of average rate of sea cliff erosion. ABSTRACT: KEYWORDS: Coastal Processes coastal erosion, cliff sediment California, South Central Region, Subregion VII, Santa Barbara Cell Reliability of Precipitation Data AUTHOR(S): Court, A. Journal of Geophysical Res., Vol. 65, No. 12, pp. 4017-4024 SOURCE: DATE: 12/01/60 Four pairs of identical rain gages were exposed, side by ABSTRACT: side, in Santa Barbara County from January through April 1959. Snow- fall as negligible at one station, the second gage caught 2/3 of the rain as its twin. An 8 inch standard gage at the same site also caught a different amount. At other locations, all were within 0.08 inches. Includes data from the Santa Barbara area. KEYWORDS: Oceanography & Meteorology precipitation California, South Central Region, Subregion VII Tropical Cyclone Effects on California AUTHOR(S): Court, A. SOURCE: Tech. Memo. NWS WR-158, U. S. Department of Commerce, NOAA, Washington, D. C., 41 pp. DATE: 09/01/80 ABSTRACT: Documents tropical cyclones in the Eastern North Pacific; aives tracks, and damage from wind, waves and rain. These storms were first documented in 1855, but their existence was officially denied until 1920. Data

began in 1840, gives descriptions as well as statistical data. KEYWORDS: Oceanography & Meteorology precipitation, storms/floods, storm surge California, South Central Region, South Coast Region, San Diego Region Los Angeles Rainfall Fequencies Change as Record Lengthens AUTHOR(S): Court, A.; Reid, W. SOURCE: Monthly Weather Review, Vol. 110, No. 1, pp. 44-45 DATE: 01/01/82 ABSTRACT: Reanalysis of work by Showalter (1948), Monthly Weather Review Vol. 96, pp. 221-223. Wet-dry years alternated more frequently in the first seventy years of data, and much less frequently since. Study casts doubt on the permanence of any findings based on short records. KEYWORDS: Oceanography & Meteorology climatology, precipitation California, South Coast Region, Subregion VIII, Subregion VI Measurements of Slopes of High-Frequency Wind Waves AUTHOR(S): Cox, C. S.SOURCE: Final Report, SIO Reference Series 57-6, Scripps Institution of Oceanography, La Jolla, California, 28 pp. DATE: 03/01/57 ABSTRACT: A study of the smallest roughness elements on the sea surface - high frequency waves and ripples. KEYWORDS: Coastal Processes wave climate California, San Diego Region, Subregion X Shore Processes at a Man-Made Headland AUTHOR(S): Cramer, A. J. SOURCE: Shore & Beach, Vol. 47, No. 3, pp. 2-7 DATE: 07/01/79 ABSTRACT: The Seacliff Highway interchange near Ventura, California was partly built on offshore fill, which created a headland interrupting the normal littoral flow. August 1970-1975 monitoring of shoreline conditions prior to and during freeway exchange construction indicated that sand accretion occurred at freeway revetment and at Hobson Park. No significant change in the shoreline from Hobson Park to Pitas Point was evident. Sand eroded from the Seacliff Colony section that had accreted after a rock revetment was constructed. KEYWORDS: Coastal Processes shoreline changes, littoral sediment, longshore transport, sand entrapment, coastal structures California, South Central Region,

A Scanning Electron Microscopy Study of Pleistocene and Holocene Sand Samples From Santa Monica Bay, Southern California

AUTHOR(S): Crist, O. H. SOURCE: M. S. Thesis, University of Southern California, Los Angeles, California, 81 pp. DATE: 08/01/80 ABSTRACT: Scanning electron microscopy of quartz sand grain surface microtextures was examined in conjunction with other lithologic data including grain size, grain roundness, mineralogy, and lithostratigraphy as interpreted from high-resolution seismic profiles to interpret the depositional environments and/or local sediment sources of samples from 20 vibracores collected from the inner Santa Monica Shelf. The microtextural features were assigned to 15 descriptive categories. KEYWORDS: Geomorphology dunes, geology, grain size, littoral sediment, California, South Coast Region, Subregion VIII, Santa Monica Cell Wave Transmission by Overtopping AUTHOR(S): Cross, R. H.; Sollitt, C. K. SOURCE: Journal of Waterways, Harbors and Coastal Engineering Division, ASCE, N. Y., Vol. 98, No. WW3, pp. 295-309 DATE: 08/01/72 ABSTRACT: This report presents a theory for wave transmission by overtopping, based on an evaluation of the energy content of the overtopping water. Comparison with large scale model (Dana Point model data) and theoretical prediction shows reasonable agreement. KEYWORDS: Coastal Processes coastal structures, wave transformation California, San Diego Region, Subregion X, Oceanside Cell First-year Effects of Land Treatment on Dry-Season Streamflow After a Fire in Southern California AUTHOR(S): Crouse, R. P. SOURCE: Report PSW-191, U. S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station, Berkeley, California, 5 pp. DATE: 10/16/61 ABSTRACT: Streamflow measurements in the dry season before and after a fire in San Dimas. Measurements show that in the treated areas (vegetation changed to grasses two years before the fire) streamflow increased. No wet season measurements were possible, because the gage was buried in debris after the first rainfall. KEYWORDS: Hydrology & Hydraulics fires, stream gaging, watersheds, river discharge, watershed sediment California, South Coast Region, Subregion IX, San Pedro Cell

Submarine Canyons Bordering Central and Southern California

AUTHOR(S): Crowell, J. C. SOURCE: Journal of Geology, Vol. 60, No. 1, pp. 58-83 DATE: 01/01/52 ABSTRACT: not reviewed KEYWORDS: Coastal Processes submarine canyons California, South Central Region, South Coast Region, San Diego Region Submarine Canyons Bordering Central and Southern California AUTHOR(S): Crowell, J. C. SOURCE: Journal of Geology, Vol. 60, pp. 58-83 DATE: 01/01/52 ABSTRACT: The characteristics of California submarine canyons between Monterev and San Diego differ from land canyons, suggesting that their origin is not subaerial: longitudinal profiles are steeper than those of most land canyons; profiles are more irregular; canyon heads near or at sea-level extend to different depths. KEYWORDS: Geomorphology, Coastal Processes geology, geomorphic processes, maps, submarine canyons California, South Central Region, South Coast Region, San Diego Region Transgressions and Regressions AUTHOR(S): Curray, J. R. SOURCE: In: Papers in Marine Geology, Shepard Commemorative Volume, R. Τ. Miller, Ed., Macmillian & Co., N. Y., pp. 175-203 DATE: 01/01/64 ABSTRACT: Detailed study of a transgressive sequence and small parts of the preceding regressive sequence of gulf, shelf, and coastal plain sediments; and perusal of literature. The general applicability of these principles to а variety of depositional situations is suggested. Includes data on Palos Verdes and La Jolla areas. KEYWORDS: Coastal Processes, Geomorphology sedimentation, shoreline changes, geology, geomorphic processes California, South Coast Region, San Diego Region, Subregion IX, Subregion Х, Santa Monica Cell, S. Santa Monica Reach, Oceanside Cell Imperial Beach, California, Design of Structures for Beach Erosion Control AUTHOR(S): Curren, C. R.; Chatham, C. E. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report H-77-15, 161 pp. DATE: 08/01/77 ABSTRACT: Investigation of the arrangement and design of alternative proposed structures for prevention of erosion of the Imperial Beach shoreline. Existing conditions are characterized by strong rip currents and longshore currents for

most wave conditions with considerable onshore-offshore movement of sand. Includes data. KEYWORDS: Coastal Processes coastal erosion problems, coastal structures, wave climate, longshore current California, San Diego Region, Subregion X, Silver Strand Cell Oceanside Harbor and Beach, California, Design of Structures for Harbor Improvement and Beach Erosion Control, Final Report AUTHOR(S): Curren, C. R.; Chatham, C. E. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg., Miss., WES Tech. Report HL-80-10, 350 pp. DATE: 06/01/80 ABSTRACT: Model investigation of erosion and proposed improvements, reproducing Oceanside Harbor, approximately 5.7 miles of shoreline, and sufficient offshore area to permit generation of the required test waves. The study was used to investigate the arrangement and design of proposed structures for: improving navigation and mooring and prevention of shoaling of Oceanside Harbor, and prevention of beach erosion. KEYWORDS: Coastal Processes wave transformation, coastal erosion problems, longshore transport, coastal structures, shore protection California, San Diego Region, Subregion X, Mission Bay Harbor, California, Design for Wave and Surge Protection and Flood Control, Final Report AUTHOR(S): Curren, C. R. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report HL-83-17, 69 pp. DATE: 06/01/83 ABSTRACT: A hydraulic model, reproducing Mission Bay Harbor, approximately 3 miles of shoreline, and sufficient offshore area to permit generation of the required test waves, was used to investigate the arrangement and design of proposed structures. Includes data. KEYWORDS: Coastal Processes wave climate, wave transformation, coastal structures California, San Diego Region, Subregion X, Mission Bay Cell Designs for Rubble-Mound Breakwaters, Dana Point, California AUTHOR(S): Dai, Y. B.; Jackson, R. A. SOURCE: Hydraulic Model Investigation, U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report No. 2-725, 23 pp. DATE: 06/01/66 ABSTRACT: Tests prior to construction of a small craft harbor at Dana Point, California. Tests will obtain data for design of stable rubble breakwaters to

allow minimum of wave energy to pass through and over the structure, obtain design data for wave absorbers, and determine relations between wave transmission in different scale models. Includes data. KEYWORDS: Coastal Processes coastal structures, wave transformation California, San Diego Region, Subregion X, Oceanside Cell A Summary of Knowledge of the Southern California Coastal Zone and Offshore Areas, Vol. I Physcial Environment AUTHOR(S): Dailey, M. D.; Hill, B.; Larising, N. SOURCE: For: Department of the Interior, Bureau of Land Management, Southern California Ocean Studies Consortium, California State Univeristies and Colleges. DATE: 09/01/74 ABSTRACT: Summary of geology, climatology and oceanography of the coastal zone from 34 deg. 11 min. Latitude to the Mexican Border (Pt. Dume and South). Includes data source lists, description of storm patterns, with temperatures, pressure and wind patterns. KEYWORDS: Oceanography & Meteorology climatology California, South Coast Region, San Diego Region, Subregion VIII, Subregion IX, Subregion X Southern California Rain and Flood, February 27 to March 4, 1938 AUTHOR(S): Daingerfield, L. H. SOURCE: Monthly Weather Review, Vol. 66, pp. 139-143 DATE: 05/01/38 ABSTRACT: Describes the results of heavy rainstorms which originated in the Hawaiian region. Gives daily rainfall at selected locations throughout the storm and some intensities. Includes data from Ventura, Los Angeles, Orange, Riverside and San Bernardino Counties. KEYWORDS: Oceanography & Meteorology precipitation, storms/floods California, South Central Region, South Coast Region Santa Ynez Flood Prevention Project Review Report AUTHOR(S): Dalen, R. S.; Erwin, R. L.; Blecker, R. F. SOURCE: Los Padres National Forest, U. S. Forest Service, Santa Barbara, California, 116+ pp. DATE: 09/01/73 ABSTRACT: A review report on flood prevention projects for the Santa Ynez River. Includes watershed description, fire and reservoir sedimentation problems, fire statistics, fire frequency analysis, sedimentation estimates for

Gibraltar Reservoir, and a double-mass balance with discussion of results. KEYWORDS: Hydrology & Hydraulics fires, reservoirs, watershed sediment, storms/floods, watersheds California, South Central Region, Subregion VI, Subregion VII, Santa Ynez River Cell, Santa Barbara Cell El Segundo Marine Terminal (ESMT) Protection Project, El Segundo Refinery, Initial Study AUTHOR(S): Dames & Moore SOURCE: For Chevron, U. S. A. Inc. Job No. 00113-668-15, Marine Services. Dames & Moore, Los Angeles, California, 100 pp. DATE: 03/01/83 Continued erosion of beach fronting subject area has occurred ABSTRACT: since 1960. Long term solutions are explored, a single 900 foot groin is recommended as best long-term protection. Includes various data. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics coastal erosion problems, coastal structures, shore protection, environmental constraints California, South Coast Region, Subregion VIII, Santa Monica Cell Longshore Sediment Transport Rates; A Compilation of Data AUTHOR(S): Das, M. M. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Research Center, Vicksburg, Miss., CERC Misc. Paper 1-71 DATE: 09/01/71 ABSTRACT: Compilation of data on longshore sediment transport and associated wave and sediment characteristics from six laboratory studies and four field studies. Laboratory observations include water depth, wave height, wave period, sand size, generator angle with toe of the beach, and longshore transport rate. The maximum transport rate near Anaheim Bay is 2130 cubic yds/day north; estimated transport rate at Silver Strand is 3400 cubic yds/day south. KEYWORDS: Coastal Processes littoral sediment, longshore transport California, South Coast Region, San Diego Region, Subregion IX, Subregion Χ Comparison of Deep Water Wave Forecasts by the Darbyshire and Bretschneider Methods and Recorded Waves for Point Arguello, California AUTHOR(S): Datz, M. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D.C.,

BEB Bulletin Vol. 7, No. 4 DATE: 10/01/53

ABSTRACT: Major disparity was in time element; highest significant wave heights from Darbyshire method were about 16 hours later than those recorded with the wave gage; those by the Bretschneider revised Sverdrup-Munk method about two hours early. Recorded waves were for October 26-29, 1950. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, Subregion VI, Santa Ynez River Cell Observations of Circulation and Suspended Sediment Transport Over Part of Southern California Borderland from Satellite Imagery AUTHOR(S): Davis, C. C. SOURCE: Abstract, Bulletin of American Association of Petr. Geology, Vol. 60, No. 4, p. 653 DATE: 01/01/76 ABSTRACT: not reviewed KEYWORDS: Coastal Processes longshore transport, coastal currents, nearshore currents, offshore/onshore transport, littoral sediment California, South Central Region, South Coast Region, San Diego Region Landsat Image Analysis of Circulation and Suspended Sediment Transport, California Continental Borderland AUTHOR(S): Davis, C. C. M. S. Thesis, University of Southern California, Los Angeles, SOURCE: California, 216 pp. DATE: 09/01/80 All usable Landsat images of the California Continental ABSTRACT: Borderland for a three-year period were analyzed to determine the feasibility of using the imagery to monitor surface water circulation processes. Cruises over San Pedro shelf coincident with satellite overpasses gathered data on suspended matter were used for comparison with the imagery. KEYWORDS: Geomorphology, Coastal Processes coastal currents, geomorphic processes, watershed sediment California, South Central Region, South Coast Region, San Diego Region Rare and Unusual Post Fire Flood Events Experienced in Los Angeles County During 1978 and 1980 AUTHOR(S): Davis, J. D. SOURCE: In: Storms, Floods and Debris Flows in Southern California and Arizona, 1978 and 1980, National Academy Press., Washington, D. C., pp. 243-256 DATE: 09/17/80 ABSTRACT: Describes flood events in areas burned just before the storms of 1978 and 1980 in Los Angeles County. Gives fire maps, tables, debris production, effectiveness of dams and a summary. One can compare this with other

flood descriptions in the same volume. Good overview of fire effects. KEYWORDS: Hydrology & Hydraulics fires, watershed sediment, reservoirs, storms/floods, watersheds California, South Coast Region, Subregion VIII, Santa Monica Cell Longshore Transport Determined by an Efficient Trap AUTHOR(S): Dean, R. G.; Berek, E. P.; Gable, C. G.; Seymour, R. J. SOURCE: Proceedings, 18th International Conference on Coastal Engineering, November 14-19, 1982, Cape Town, Republic of South Africa, ASCE, N.Y. DATE: 01/01/83 ABSTRACT: Describes a field measurement program carried out at Santa Barbara. California. Wave characteristics were determined; wave conditions were transformed to the breaker line, and correlation with the sediment transport was established. Surveys over 13 months documented a total of 288,600 cubic meters of net sediment transport. Correlations are presented. KEYWORDS: Coastal Processes wave climate, wave transformation, longshore transport California, South Central Region, Water Repellent Soils: A State of the Art AUTHOR(S): DeBano, L. F. SOURCE: General Tech. Report No. PSW-46, U. S. Forest Service, Pacific Southwest Forest and Range Experiment Station, Berkeley, California, 21 pp. DATE: 01/01/81 ABSTRACT: State of the art review of water repellency in soils and its effects on runoff after fires. Includes topics of fire induced repellency, soilwater movement, and management problems. KEYWORDS: Hydrology & Hydraulics fires, watershed sediment California San Dieguito Lagoon Resource Enhancement Program AUTHOR(S): Del Mar, City of; State Coastal Conservancy SOURCE: City of Del Mar, Del Mar, California, 75+ pp. DATE: 12/01/79 ABSTRACT: A report describing the program which is to restore and enhance a degraded wetland on the San Diego coast. Program is to be included in the local coastal plan. KEYWORDS: Coastal Processes, Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., tidal inlets California, San Diego Region, Subregion X, Oceanside Cell Meteorological Summary Pertinent to Atmospheric Transport and Dispersion Over Southern California AUTHOR(S): DeMarrais, G. A.; Holzworth, G. C.; Holser, C. R.

SOURCE: Technical Paper 54, U. S. Department of Commerce, Weather Bureau Bureau, 86 pp. DATE: 01/01/65 ABSTRACT: Gives overview of wind patterns in Southern California, from San Luis Obispo to the Mexican Border. Includes streamline analysis, surface wind frequency data (by time of day, month), detailed analyses of surface wind observations, winds aloft, precipitation with wind roses. Chapter eight deals with synoptic regimes and their relationships to Southern California wind patterns. KEYWORDS: Oceanography & Meteorology climatology, wind California, South Central Region, South Coast Region, San Diego Region Geology of Southwestern Santa Barbara County, California AUTHOR(S): Dibblee, T. W. SOURCE: Bulletin 150, California Division of Mines, Sacramento, California, 95 pp. DATE: 01/01/50 ABSTRACT: The lithology, structural geology, and geomorphology of the area of Point Conception is described. Maps and cross sections pro- vide geologic data on the coastal cliffs and coastal drainage basins. Some data is provided on sand and gravel mining. KEYWORDS: Geomorphology geology, maps, mining California, South Central Region, Subregion VII, Santa Barbara Cell Geology of the Central Santa Ynez Mountains, Santa Barbara County, California AUTHOR(S): Dibblee, T. W. Bulletin 186, California Division of Mines and Geology, San SOURCE: Francisco, California, 99 pp. DATE: 01/01/66 ABSTRACT: The area mapped includes the central sector of the easttrending Santa Ynez Range of mountains and adjacent coastal strip to the south in the vicinity of Santa Barbara, and parts of the adjacent Santa Ynez River area and of the northwest- trending San Rafael Mountains to the north. KEYWORDS: Geomorphology geology, maps, mining California, South Central Region, Subregion VI, Subregion VII, Santa Ynez River Cell, Santa Barbara Cell Aerial Photographs in the Geological Study of the Shore Features and

Processes AUTHOR(S): Dietz, R. S.

SOURCE: Photogrammetric Engineering, Vol. 13, pp. 537-545 DATE: 01/01/47 ABSTRACT: Aerial photos of shoreline features along Southern California. KEYWORDS: Geomorphology, Coastal Processes aerial photography, coastal erosion, geomorphic processes California, San Diego Region, Subregion X Scripps Canyon AUTHOR(S): Dietz, R. S. SOURCE: Papers in Marine Geology, Shepard Commemorative Volume, R. I. Miller, Ed., Macmillan & Co., N. Y., pp. 23-64 DATE: 01/01/64 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology submarine canyons California, San Diego Region, Subregion X, Oceanside Cell Geological Features of La Jolla Canyon As Revealed by Dive No. 83 of the Bathyscope Trieste AUTHOR(S): Dill, R. F. U. S. Navy Electronic Lab., San Diego, California, Tech. Memo SOURCE: 516, 27 pp. DATE: 01/01/61 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geology, submarine canyons California, San Diego Region, Subregion X, Oceanside Cell Sedimentation and Erosion in Scripps Submarine Canyon Head AUTHOR(S): Dill, R. F. SOURCE: In: Papers in Marine Geology, Shepard Commemorative Volume, R. I. Miller, Ed., Macmillian & Co., N. Y., pp. 23-41 DATE: 01/01/64 Describes geological observations made in the Sumner Branch ABSTRACT: of the Scripps Submarine Canyon off La Jolla, California, a branch of the large La Jolla Canyon emptying into the San Diego Trough. Observations were visible and in situ on December 5, 1959 and March 24, 1960, and from January 1 to March 6, 1961, to examine sedimentary and organic debris above and in the canyon head, to determine movement of sediment mat, and look for evidence of submarine erosion. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, offshore/onshore transport, submarine canyons California, San Diego Region, Subregion X, Wave-Formed Ripples in Nearshore Sands

AUTHOR(S): Dingler, J. R.; Inman, D. L.

SOURCE: Proceedings of the 15th Coastal Engineering Conference, Honolulu, July 11-17, 1976, ASCE, N.Y., pp. 2109-2126 DATE: 01/01/76 ABSTRACT: Ripples in fine sand were studied at La Jolla, California where profiles were obtained using a newly developed high-resolution sonar capable of vertical resolution of the order of one millimeter. KEYWORDS: Coastal Processes littoral sediment, beach profiles California, San Diego Region, Subregion X, Oceanside Cell Effects of Wave Action on the Shape of Beach Gravel AUTHOR(S): Dobbs, P. H. SOURCE: The Compass, Vol. 35, No. 4, pp. 269-275 DATE: 05/01/58 ABSTRACT: Beach gravels at Palisades Beach, California are derived mainly from Temescal Canyon and other canyons in the area. Studies of impact marks on painted pebbles and cobbles show that spherical rocks are abraded at a constant rate over the entire surface. Flat surfaces of flat pebbles and cobbles received fewer impacts than the rounded edges. KEYWORDS: Geomorphology, Coastal Processes geology, geomorphic processes, grain size, littoral sediment California, South Coast Region, Subregion VIII, Santa Monica Cell Reliability of Shoreline Change Measurements from Aerial Photographs AUTHOR(S): Dolan, R.; Hayden, B. P.; May, P.; May, S. SOURCE: Shore & Beach, Vol. 48, No. 4, pp. 22-29 DATE: 01/01/80 ABSTRACT: Previously, the authors described a method for assembling data on shoreline erosion and the patterns of overwash penetration from sequential aerial photography. Using this approach called the orthogonal grid mapping system (OGMS), they now produce and analyze data on shoreline erosion and overwash penetration changes and rates of change at 100 meter intervals along 1000 km of the Atlantic, Pacific, and Gulf coasts. KEYWORDS: Coastal Processes aerial photography, coastal erosion, overwash, shoreline changes California Erosion of the U. S. Shorelines AUTHOR(S): Dolan, R.; Hayden, B.; May, S. SOURCE: In: Handbook of Coastal Processes and Erosion, Paul D. Komar, Ed., CRC Press, Boca Raton, Florida, pp. 285-299 DATE: 01/01/83 ABSTRACT: Assembly of existing data collections on shoreline changes for the U. S. to be presented as a series of 1: 2,000,000 scale multi-color U.S.G.S.

maps and a 1: 7,500,000 scale map in the National Atlas. The data bank of shoreline rates of change is accessible in a computer-based coastal erosion information system (CEIS) at the University of Virginia. Presents a summary of the shoreline rates of change for various geographic regions of the U.S. based on the CEIS data base. KEYWORDS: Coastal Processes shoreline changes, maps California, Oregon Winter Storm Damage Along the California Coast 1977-1978 AUTHOR(S): Domurat, G. W. SOURCE: U. S. Army Corps of Engineers, San Francisco District, 75 pp.; and Shore & Beach, Vol. 46, No. 3, pp. 15-20 DATE: 01/01/78 ABSTRACT: California experienced significant damage during the winter of January and February 1978. A combination of high astronomical tides, strong onshore winds, high storm waves, and excessive rainfall produced an aggravated erosional condition. This report documents the causes and results of the dynamic conditions which led to the storm damage along the California coastline. An appendix summarizes a report by the California Coastal Commission which gives a cost analysis of damage to the coast. KEYWORDS: Coastal Processes, Socioeconomics storm damage, storms/floods, tides, storm waves, coastal erosion problems, institutions/planning/mgmt. California The California National Ocean Survey Marine Boundary Program AUTHOR(S): Dowden, J. N. SOURCE: Coastal Zone '83, Symposium, San Diego, California, June 1-4, 1983; ASCE, N. Y., Vol. III, pp. 2478-2486 DATE: 01/01/83 ABSTRACT: Water or water-related boundary jurisdictional limits or real property interests have received much attention in recent years, particularly in California's tidal environment. This paper discusses the planning, execution and results of the cooperative venture between the National Ocean Survey and the State of California in the reoccupation of historic tide station locations throughout the State. KEYWORDS: Coastal Processes sea level change, tides California

Distribution and Transport of Suspended Matter, Santa Barbara Channel, California AUTHOR(S): Drake, D. E. SOURCE: Ph.D. Dissertation, University of Southern California, Los Angeles, California DATE: 01/01/72 ABSTRACT: not reviewed KEYWORDS: Coastal Processes littoral sediment, longshore transport California, South Central Region, Subregion VII, Santa Barbara Cell Sediment Transport on Santa Barbara-Oxnard Shelf, Santa Barbara Channel, California AUTHOR(S): Drake, D. E.; Kolpak, R. L.; Fischer, P. J. SOURCE: In: Shelf Sediment Transport: Processes and Patterns, D. Swift, D. B. Duane, and O. H. Pilkey, Eds., Dowden, Hutchinson, and Ross, Inc., Stroudsburg, Pennsylvania, pp. 307-332 DATE: 01/01/72 ABSTRACT: not reviewed KEYWORDS: Coastal Processes littoral sediment, longshore transport, offshore/onshore transport California, South Central Region, Subregion VII, Santa Barbara Cell Distribution and Transport of Suspended Particulate Matter in Hueneme, Redondo, Newport, and La Jolla Submarine Canyons AUTHOR(S): Drake, D. E.; Gorsline, D. S. SOURCE: Geological Society of America Bulletin, Vol. 84, No. 12, pp. 3949-3968 DATE: 01/01/73 ABSTRACT: not reviewed KEYWORDS: Coastal Processes longshore transport, sedimentation, submarine canyons California, South Central Region, South Coast Region, San Diego Region Distribution and Transport of Suspended Particulate Matter in Submarine Canyons Off Southern California AUTHOR(S): Drake, D. E. SOURCE: In: Suspended Solids in Water, R. J. Gibbs, Ed., Marine Science, Vol. 4, pp. 133-153 DATE: 01/01/74 ABSTRACT: not reviewed KEYWORDS: Coastal Processes sedimentation, submarine canyons, offshore/onshore transport California, South Central Region, South Coast Region, San Diego Region Radioisotopic Sand Tracer Study, Point Conception, Caifornia, Preliminary Report on Accomplishment, July 1966-June 1968 AUTHOR(S): Duane, D. B.; Judge, C. W. SOURCE: U.S. Army Corps of Engineers, Coastal Engineering Research Center,

Vicksburg, Miss., CERC Misc. Paper 2-69, 81 pp. DATE: 05/01/69 ABSTRACT: Developed radioactive tracers to research sand movement, and littoral processes. Objectives included the determination of suitable isotopes and development of detectors. Sand indigenous to the area was labeled with Xenon-133. A mobile system housed in a towed "ball" detected radiation. Computer programs corrected and plotted radiation data. Field tests at Point Conception included isotope distribution, sediment analysis, offshore profiles, and oceanic and atmospheric environment monitoring. Model tests of CERC compared high and low specific activity xenon. KEYWORDS: Coastal Processes longshore transport, offshore/onshore transport, littoral sediment California, South Central Region, Subregion VII, Santa Barbara Cell Tracing Sand Movement in the Littoral Zone; Progress in the Radioisotopic Sand Tracer (RIST) Study, July 1968 - February 1969 AUTHOR(S): Duane, D. B. U. S. Army Corps of Engineers, Coastal Engineering Research SOURCE: Center, Vicksburg, Miss., CERC Misc. Paper 4-70 DATE: 08/01/70 ABSTRACT: Tagging procedures, instrumentation field surveys, and datahandling techniques have been developed by the RIST study for collection and analysis of more than 12,000 bits of information per hour over a survey track of more than 18,000 feet. Experiments at various coastal areas in California used sand tagged with isotopes of xenon or gold. The RIST system can provide data useful in understanding the effect of shore structures on sediment transport. KEYWORDS: Coastal Processes littoral sediment, longshore transport, California The Santa Monica Causeway Project AUTHOR(S): Dunham, J. W. SOURCE: Shore & Beach, Vol. 33, No. 1, pp. 5-10 DATE: 04/01/65 ABSTRACT: not reviewed KEYWORDS: Coastal Processes longshore transport, beach nourishment/dredging, coastal structures, institutions/planning/mgmt. California, South Coast Region, Subregion VIII, Santa Monica Cell Use of Groins as Artificial Headlands AUTHOR(S): Dunham, J. W. SOURCE: Coastal Engineering, Santa Barbara, California, Specialty Conference, October 1965, Chapter 32, ASCE, N.Y., pp. 755-762 DATE: 10/01/65

The successful use of long groins to form artificial pocket ABSTRACT: beaches at three Southern California beaches. Need for more research as to effectiveness of such structures is suggested, and other possible uses of long groins is discussed. KEYWORDS: Coastal Processes beaches, coastal structures California, South Coast Region, San Diego Region, Subregion IX, Subregion Х Proposed Santa Monica Causeway Project AUTHOR(S): Dunham, J. W. SOURCE: Journal of Waterways and Harbors Division, ASCE, N.Y.; Vol. 94, No. WW4, Proc. Paper 6219, pp. 425-436, and Discussion Vol. 95, No. WW3, August 1969, pp. 420-429 DATE: 11/01/68 ABSTRACT: Routing of the new freeway, northwestward from Santa Monica, California, over land fills in the ocean rather than along the beach or inland would avoid costly and time-consuming right-of-way acquisition; preserve the existing beach and provide six miles of new beach through construction of а perched beach in lieu of a seawall; the perched beach would transport littoral sand through normal wave action; water areas behind the land fills would enhance smallcraft navigation and water-oriented recreation; and the project could be paid for by revenues derived from high-return uses of land areas created additional to freeway right-of-way needs. The theory KEYWORDS: Coastal Processes longshore transport, beach nourishment/dredging, coastal structures, institutions/planning/mgmt. California, South Coast Region, Subregion VIII, Santa Monica Cell Avalon Transportation Wharf AUTHOR(S): Dunham, J. W. SOURCE: Journal of Waterways, Harbors and Coastal Engineering Division, ASCE, N. Y., Vol. 97, No. WW2, pp. 371-384 DATE: 05/01/71 ABSTRACT: This paper considers the events that led to the selection of a new site for a wharf, the oceanographic study, the design of the new wharf, its construction, and problems encountered with the fender system. KEYWORDS: Coastal Processes coastal structures California, San Diego Region, Subregion IX, San Pedro Cell

Beach Nourishment Techniques, Report 4; Wave Climates for Selected U. S. Offshore Beach Nourishment Projects, Main Text AUTHOR(S): Durham, D. L.; Hales, L. Z.; Richardson, T. W.

SOURCE: U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., Tech. Report H-76-13, 27 pp. DATE: 04/01/81 ABSTRACT: Data are presented describing the average wave climate at 10 selected beach nourishment sites on the coastline of the continental United States: including Redondo Beach, Calif. The data were derived by calculating the effects of refraction, shoaling, and island sheltering on the deepwater wave climate applicable to each site. Deepwater wave climates were obtained from Synoptic Shipboard Meteorological Observation data tapes and California Department of Navigation and Ocean Development files. Tables and plots of wave height/period frequency distribution on a monthly, annual, and azimuth of approach basis are presented as a means of summarizing the KEYWORDS: Coastal Processes beach nourishment/dredging, wave climate, wave transformation California, South Coast Region, Subregion VIII, Santa Monica Cell Application of NOAA's Coastal Wave Monitoring Program to Coastal Erosion AUTHOR(S): Earle, M. D. SOURCE: Shore & Beach, Vol. 46, No. 1, pp. 3-7 DATE: 01/01/78 ABSTRACT: To provide the needed wave data and wave statistics, the National Ocean Survey, NOAA, has begun the coastal wave monitoring program which will collect and analyze long-term coastal and offshore wave spectral data at many locations. Application of the wave data to coastal erosion is discussed. KEYWORDS: Coastal Processes coastal erosion, wave climate, wave transformation California Storm Surge Conditions for the California Coast and Continental Shelf AUTHOR(S): Earle, M. D. SOURCE: Marine Environments Corp., Rockville, Maryland, 56 pp. DATE: 01/01/79 ABSTRACT: not reviewed KEYWORDS: Coastal Processes storm surge California Earthquakes, Rain, and Tides at Portuguese Bend Landslide, California AUTHOR(S): Easton, W. H. SOURCE: Association of Engineering Geologists Bulletin No. 10, pp. 173-194 DATE: 01/01/73 ABSTRACT: not reviewed KEYWORDS: Coastal Processes neotectonics, precipitation, tides California, South Coast Region, Subregion VIII, S. Santa Monica Reach

Toward Fullfillment of An Urgent Need: Coastal Wave Data Acquisition and Analysis AUTHOR(S): Edmisten, J. K. SOURCE: Shore and Beach, Vol. 46, No. 3, pp. 3-14 DATE: 01/01/78 ABSTRACT: Describes meteorological conditions which produce waves along the California coast; Pacific High - Pacific anticyclone which is important in summer, associated with Nevada low; Extra- Tropical Cyclones - source of severe winter waves for Southern California; Tropical cyclones; and Southern Hemisphere Cyclones - produce swell in Northern Hemisphere in the summer. Includes data sources. KEYWORDS: Oceanography & Meteorology storms/floods, wave climate California, South Central Region, South Coast Region, San Diego Region A Survey of Expert Opinion on Active and Potentially Active Faults in California, Nevada, Arizona, and Northern Baja California AUTHOR(S): Eguchi, R. T.; Campbell, K. W.; Higgins, J. H. Open File Report No. 79-1328-2, U. S. Dept. of Interior, SOURCE: Geological Survey, Menlo Park, California, 70 pp. DATE: 02/01/79 ABSTRACT: A summary of opinions by geologists and siesmologists on the location of active and potentially active faults in California. KEYWORDS: Geomorphology neotectonics California, South Central Region, South Coast Region, San Diego Region Proceedings of Conference on Sediment Problems in California AUTHOR(S): Einstein, H. A., Ed.; Johnson, J. W., Ed. SOURCE: Sponsored by Hydraulic Laboratory, Dept. of Engineering, Issued by Committee on Research in Water Resources; University of California, Berkeley, California, 142 pp. DATE: 11/26/56 ABSTRACT: Includes discussion of problems and required research on coastal and tidal problems. Some data. KEYWORDS: Coastal Processes coastal erosion problems, coastal structures, longshore transport California Groups of Waves in Shallow Water AUTHOR(S): Elgar, S.; Guza, R. T.; Seymour, R. J. SOURCE: Journal of Geophysical Research, Vol. 89, No. C3, pp. 3623-3634 DATE: 01/01/84 ABSTRACT: not reviewed KEYWORDS: Coastal Processes wave transformation California

A Study on the Effect of Large Blocking Highs on the General Circulation in the Northern-Hemisphere Westerlies AUTHOR(S): Elliot, R. D.; Smith, T. B. SOURCE: Journal of Meteorology, Vol. 6, No. 2, pp. 67-85 DATE: 04/01/49 ABSTRACT: Lengthy discussion of blocking highs with tentative theory of formation. Relates blocking highs to heat accumulation in lower latitudes. Discusses dispersion by large scale turbulence patterns. Includes weather maps with general examples. KEYWORDS: Oceanography & Meteorology climatology California, South Central Region, South Coast Region, San Diego Region California Storm Characteristics and Weather Modification AUTHOR(S): Elliot, R. D. Journal of Meteorology, Vol. 15, pp. 486-493 SOURCE: DATE: 12/01/58 ABSTRACT: Presents general storm characteristics for Southern California rainy season. Includes brief discussion of storm types and general climate; discusses marine layer influence. Major emphasis on nuclei for precipitation augmentation. KEYWORDS: Oceanography & Meteorology precipitation California, South Central Region, South Coast Region, San Diego Region Lithology of the Sea Floor Off Southern California AUTHOR(S): Emery, K. O.; Shepard, F. P. SOURCE: Geological Society of America Bulletin, Vol. 56, pp. 431-479 DATE: 01/01/45 ABSTRACT: Reconnaissance study includes rock descriptions of dredge samples collected offshore. KEYWORDS: Geomorphology, Coastal Processes geology, maps, submarine canyons California, South Central Region, South Coast Region, San Diego Region Submarine Geology Off San Diego, California AUTHOR(S): Emery, K. O.; Butcher, W. S.; Gould, H. R.; Shepard, F. P. SOURCE: Journal of Geology, Vol. 60, No. 6, pp. 511-548 DATE: 11/01/52 The inner sediments that partially blanket the sea floor have ABSTRACT: а distribution that is much more complex than the usual concept of marginal marine sediments. This report includes a description of the chief factors that control the distribution. KEYWORDS: Geomorphology, Coastal Processes geology, geomorphic processes, maps, submarine canyons, wave transformation, littoral sediment

California, San Diego Region, Subregion X Source of Water in Basins Off Southern California AUTHOR(S): Emery, K. O. SOURCE: Journal of Marine Research, Vol. 13, pp. 1-21 DATE: 01/01/54 ABSTRACT: not reviewed KEYWORDS: Coastal Processes coastal currents, wave climate California, South Central Region, South Coast Region, San Diego Region General Geology of the Offshore Area, Southern California AUTHOR(S): Emery, K. O. SOURCE: California Divn. of Mines and Geology, Bulletin 170, pp. 107-111 DATE: 01/01/54 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geology California, South Central Region, South Coast Region, San Diego Region Size Distribution of Gravels AUTHOR(S): Emery, K. O. Journal of Geology, Vol. 63, pp. 39-49 SOURCE: DATE: 01/01/55 ABSTRACT: Textural analyses were made of 54 samples of gravel beaches from the Pacific Coast of Southern California and Northern Mexico. These samples, plus one each from Washington and Japan, and 6 others previously reported in the geological literature are very well sorted and have nearly symmetrical frequency curves. KEYWORDS: Geomorphology, Coastal Processes geology, grain size, littoral sediment California, Mexico, South Coast Region, Subregion VIII, Santa Monica Cell A Submarine Slope Off Southern California AUTHOR(S): Emery, K. O.; Terry, R. SOURCE: Journal of Geology, Vol. 64, pp. 271-280 DATE: 01/01/56 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geology California, South Central Region, South Coast Region, San Diego Region Shallow Submerged Marine Terraces of Southern California AUTHOR(S): Emery, K. O. SOURCE: Geological Society of America Bulletin, Vol. 69, pp. 39-60 DATE: 01/01/58 not reviewed ABSTRACT: KEYWORDS: Coastal Processes geology, geomorphic processes California, South Central Region, South Coast Region, San Diego Region Basin Plains and Aprons Off Southern California

AUTHOR(S): Emery, K. O. SOURCE: Journal of Geology, Vol. 68, pp. 464-479 DATE: 01/01/60 ABSTRACT: not reviewed KEYWORDS: Coastal Processes geology, geomorphic processes California, South Central Region, South Coast Region, San Diego Region The Sea Off Southern California AUTHOR(S): Emery, K. O. SOURCE: John Wiley Co., New York, 366 pp. DATE: 01/01/60 ABSTRACT: not reviewed KEYWORDS: Coastal Processes wave climate California, South Central Region, South Coast Region, San Diego Region Erosion of Rock Shores at La Jolla, California AUTHOR(S): Emery, K. O.; Kuhn, G. G. SOURCE: Publications in Marine Geology, Vol. 37, pp. 197-208 DATE: 01/01/80 ABSTRACT: Detailed photographs repeated in 1979 after several decades and other measurements at La Jolla, California provide information about processes and rates of rock-shore and sea- cliff erosion. KEYWORDS: Coastal Processes, Geomorphology cliff sediment, coastal erosion, geology, geomorphic processes California, San Diego Region, Subregion X, Oceanside Cell Sea Cliffs: Their Processes, Profiles and Classification AUTHOR(S): Emery, K. O.; Kuhn, G. G. SOURCE: Geological Society of America Bulletin, Vol. 93, pp. 644-654 DATE: 01/01/82 ABSTRACT: Profiles in the San Diego region were taken to supplement onsite examination to establish the activity and dominance of erosional processes and indicate changes in regimen. KEYWORDS: Geomorphology, Coastal Processes cliff sediment, geology, geomorphic processes California, San Diego Region, Subregion X Petrology of Some Middle and Late Eocene Sandstones From the Southern California Borderland AUTHOR(S): Erickson, J. W. SOURCE: Paleogene Symp. and Selected Tech. Papers, Conf. of Future Energy Horizons of the Pac. Coast, D. W. Weaver, et al., Eds., AAPG-SEPM-SEG, Long Beach, California, pp. 191-201 DATE: 01/01/75 ABSTRACT: Petrographic data of some common Eocene Age rocks. KEYWORDS: Geomorphology cliff sediment, geology, petrology California, San Diego Region, Subregion X

Evaluation of the Computation of Wave Direction With Three-Gage Arrays AUTHOR(S): Esteva, D. C. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center. Vicksburg, Miss., CERC Tech. Paper No.77-7, 123 pp. DATE: 07/01/77 ABSTRACT: Description of the collection and analysis of data obtained with an array of five pressure sensors near Point Mugu, California is presented. The 10 three-gage array combinations possible with five gages are used to compare redundant values of the direction of wave propagation. The dependence of directional determination on array orientation as relative to incident wave direction and wave length at the array sites is revealed by calculation based on simulated narrow-banded wave trains. Gives results of the field survey. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell, S. Santa Barbara Reach Determination of Wave Direction in Coastal Waters AUTHOR(S): Esteva, D. C. SOURCE: Marine Technology Society Journal, Vol. 12, No. 2, pp. 17-22 DATE: 04/01/78 ABSTRACT: A simple mathematical model to determine wave direction from 3-gage arrays was applied to the high resolution spectra of pressure records from a 5-gage array off the California Coast. Redundant directions were obtained from the ten 3-gage arrays possible. The Point Mugu array may give wave/direction to within 20 degrees for narrow-banded wave trains with periods greater than 9 seconds. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell Mining and Marketing Sand and Gravel - Outer Continental Shelf, Southern California AUTHOR(S): Evans, J. R.; Dabai, G. S.; Levine, C. SOURCE: California Geology, December 1982, pp. 259-276 DATE: 12/01/82 ABSTRACT: A feasibility study of major offshore operation for mining, processing, and marketing sand from the San Pedro Shelf, and gravel from the San Diego Shelf. Includes bathymetric maps, schematics, conclusions. KEYWORDS: Coastal Processes mining, maps California, South Central Region, South Coast Region, San Diego Region, Subregion IX, Subregion X

Shoreline Changes Downdrift of a Littoral Barrier AUTHOR(S): Everts, C. H. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center. Vicksburg, Miss., CERC Reprint 83-10, pp. 673-689 DATE: 01/01/83 ABSTRACT: Crenulate-shaped bays form downdrift of coastal structures that impede the longshore transport of sediment. Sylvester (1960, 1970, 1976) developed an empirical method to predict the equilibrium shape of a crenulate bay between two headlands after the bay began forming. An extension of that model, presented in this paper, allows a prediction of the time-dependent evolution of a crenulate bay before littoral barriers are constructed. This method provides a planning tool to predict shoreline changes that could occur downdrift of a jetty, groin, or offshore breakwater. KEYWORDS: Coastal Processes coastal structures, longshore transport, California Institutional Problems in the Future Management of the California Coastal Resource Program AUTHOR(S): Ewen, L. SOURCE: Coastal Zone '83, Symposium, San Diego, California, June 1-4, 1983; ASCE, N. Y., Vol. I, pp. 252-272 DATE: 01/01/83 ABSTRACT: A brief history of California coastal management efforts, followed by a discussion of emerging problems affecting the future success of the existing program, including an outline of possible options for maintaining an effective long-term strategy for coastline protection in California. KEYWORDS: Coastal Processes institutions/planning/mgmt. California Sediment Management for Southern California Mountains, Coastal Plains, and Shoreline AUTHOR(S): Fall, E. W. Regional Geologic History Report No. 17-A, Environmental SOURCE: Quality Lab., California Institute of Technology, Pasadena, California, 33 pp. DATE: 05/01/81 ABSTRACT: not reviewed KEYWORDS: Coastal Processes institutions/planning/mgmt., river sediment discharge California, South Central Region, South Coast Region, San Diego Region Origin and Recent History of Newport Submarine Canyon, California Continental Borderland

AUTHOR(S): Felix, D. SOURCE: Tech. Report for Office of Naval Research, Contract No. NONR 228(17)NR083-144, Department of Geologic Sciences, Report 69-3, University of Southern California, Los Angeles, Calif., 116 pp. DATE: 05/07/69 ABSTRACT: A detailed geological study in the upper portion of the canyon shelf and beach, to resolve conflicting observations relative to longshore drift to the San Diego Trough. Historical development of modern sedimentation system. Conclusion was that collection of sand and debris in nearshore head is precluded by divergence of longshore currents from the head under most wave conditions. The canyon is presently inactive and cannot be the source of recent turbidities in the Trough. KEYWORDS: Coastal Processes geology, submarine canyons California, South Coast Region, San Diego Region, Subregion IX, Subregion X, San Pedro Cell Slope Stability and Its Relationship to Mass Sediment Properties in Three Submarine Canyon Heads AUTHOR(S): Felix, D. W. Sedimentation, University of Southern California, Los Angeles, SOURCE: California, 25 pp. DATE: 01/01/67 ABSTRACT: not reviewed KEYWORDS: Coastal Processes offshore/onshore transport, submarine canyons California Recent Sediments of Upper Newport Submarine Canyon AUTHOR(S): Felix, D. W. SOURCE: M. S. Thesis, University of Southern California, Los Angeles, California, 116 pp. DATE: 01/01/69 ABSTRACT: Submarine sediments of Newport Canyon are studied. KEYWORDS: Geomorphology, Coastal Processes grain size, littoral sediment, submarine canyons California, South Coast Region, Subregion IX, San Pedro Cell Newport Submarine Canyon, California: An Example of the Effect of Shifting of Sand Supply Upon Canyon Position AUTHOR(S): Felix, D. W.; Gorsline, D. S. SOURCE: Marine Geology, Vol. 10, pp. 177-178 DATE: 01/01/70 ABSTRACT: not reviewed KEYWORDS: Coastal Processes submarine canyons, offshore/onshore transport

California, South Coast Region, Subregion IX, San Pedro Cell Report on Debris Reduction Studies for Mountain Watersheds AUTHOR(S): Ferrel, W. R.; et. al. SOURCE: Los Angeles County Flood Control District, Dam and Conservation Branch, Los Angeles, California, 162 pp. DATE: 11/01/59 ABSTRACT: General survey of data on erosion and debris from Los Angeles County watersheds. Relationships with fires (burning rates) and erosion rates are developed. Includes data. KEYWORDS: Hydrology & Hydraulics fires, watershed sediment California, South Coast Region Integrated Management of San Diego Bay: A Socio-Economic Challenge AUTHOR(S): Firle, T. E. SOURCE: Coastal Zone '83, Symposium, San Diego, California, June 1-4, 1983; ASCE, N. Y., Vol. II, pp. 1714-1733 DATE: 01/01/83 ABSTRACT: This paper discusses the management of a complex geopolitical and natural resource, San Diego Bay. The Port District was assembled by consolidating the California tidelands surrounding San Diego Bay. This required removing control of the land and water areas from the mean high tide line to the pierhead line (or beyond) from the five surrounding cities, and appointing Port Commissioners as policy makers. KEYWORDS: Coastal Processes, Socioeconomics environmental constraints, institutions/planning/mgmt. California, San Diego Region, Subregion X, San Diego Bay Model Study, Final Report AUTHOR(S): Fisackerly, G. M. SOURCE: Hydraulic Model Investigation, U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report H-74-12, 21 pp. DATE: 11/01/74 ABSTRACT: Study to determine the effects of a second entrance into the Bay on the hydraulic and flushing characteristics of the Bay. Includes data. KEYWORDS: Coastal Processes wave climate, tidal inlets, tides California, San Diego Region, Subregion X, Silver Strand Cell Study of Quaternary Shelf Deposits (Sand and Gravel) of Southern California AUTHOR(S): Fischer, P. J.; Berry, R. W. SOURCE: F.R. 82-11, California State Department of Boating and Waterways Sacramento, California, 75 pp. DATE: 06/01/83

ABSTRACT: Survey of potential sand and gravel resources from Point Conception to the Mexican border. Study designed to emphasize the beach replenishment aspects of the deposits. Recent sediment volumes were calculated. Includes data. KEYWORDS: Coastal Processes mining, beach nourishment/dredging California, South Central Region, South Coast Region, San Diego Region Sediment Trap Studies of Sand Movement in La Jolla Bay AUTHOR(S): Fisher, R. L.; Millo, R. SOURCE: Geological Society of America Bulletin, Vol. 63, p. 1328 DATE: 01/01/52 ABSTRACT: Abstract; observations of sand movement in La Jolla Bay using а multi-sock sediment trap designed to separate the onshore, offshore, and longshore components of sediment transport. KEYWORDS: Geomorphology, Coastal Processes geology, littoral sediment, longshore transport, offshore/onshore transport California, San Diego Region, Subregion X, Oceanside Cell Social Groups Impacted by Reduced Beach Access AUTHOR(S): Flachsbart, P. G. SOURCE: Coastal Zone '78, Vol 1, Symposium; ASCE, N. Y., pp. 149-163 DATE: 01/01/78 ABSTRACT: Proposes answers to questions of conflict of use facing coastal zone management, and related impacts. Social groups' perception of value of access, use, and adaptability to alternative recreational opportunities are identified. Answers are based on empirical data; analysis of possible associations between frequency of use - social economic, demographic, social/ethnic and situational. KEYWORDS: Coastal Processes, Socioeconomics institutions/planning/mgmt., growth potential/recreation California, South Central Region, South Coast Region, San Diego Region Character of Currents Off Southern California AUTHOR(S): Fleming, R. H. SOURCE: 6th Pacific Science Congressional Proceedings, 1939, Vol. 3, pp. 149-160 DATE: 01/01/40 ABSTRACT: not reviewed KEYWORDS: Coastal Processes coastal currents California, South Central Region, South Coast Region, San Diego Region Performance Documentaion of the Longard Tube at Del Mar, California, 1980-1983 AUTHOR(S): Flick, R. E.; Waldorf, B. W. SOURCE: Coastal Engineering, Vol. 8, Elsevier Science Publishers, B.V.

Amsterdam, pp. 199-217 DATE: 01/01/84 ABSTRACT: The Longard Tube experimental revetment installed at Del Mar, California in December 1980 has been monitored and its performance documented until it subsided and became ineffective during and after the severe winter storm of December 1982. The data suggest that the tube had no measurable effect on the sand level at Del Mar Beach. The beach profile monitoring program conducted by Scripps in Del Mar since 1974 served as important background information. KEYWORDS: Coastal Processes coastal structures, shore protection, storm damage California, San Diego Region, Subregion X, Extreme Sea Levels on the Coast of California AUTHOR(S): Flick, R. E.; Cayan, D. R. SOURCE: 19th International Conference on Coastal Engineering, Houston, Texas, Sept. 3-7, 1984; ASCE, N. Y., 13 pp. DATE: 09/01/84 ABSTRACT: Describes and examines the oceanographic and meteorological conditions prevailing during the winter of 1982-1983 and attempts to put them into perspective using historical information at San Diego, California. Emphasis is placed on the processes and forces that contribute to extreme sea levels in the hope that better understanding of these and more complete information on historical extremes will help the engineer in design and in assessment of risk. KEYWORDS: Coastal Processes, Oceanography & Meteorology sea level change, tides California, South Coast Region, San Diego Region, Subregion IX, Subregion Х Comparison of Observed Wave Direction With a Refraction Diagram AUTHOR(S): Forrest, D. R. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Bulletin Vol. 5, No. 2 DATE: 04/01/51 ABSTRACT: During a period of exceptionally clear visibility, observations of offshore wave direction at Mission Bay, California, were made with a transit sighting bar and compared with directions obtained from wave refraction analysis. KEYWORDS: Coastal Processes wave climate, wave transformation California, San Diego Region, Subregion X, Mission Bay Cell Annual Precipitation for California Since 1600, Reconstructed from Western North American Tree-Rings AUTHOR(S): Fritts, H. C.; Gordon, G. A.

SOURCE: Laboratory of Tree-Ring Research, University of Arizona, Tucson, Arizona DATE: 07/01/80 ABSTRACT: Reconstructs rainfall patterns back to 1600. Regression coefficients are low (less than 0.5) but results may offer some year to vear trends. Includes tables and graphs of "inch of rainfall for California". KEYWORDS: Oceanography & Meteorology climatology, precipitation California Report on Precipitation in the Upper Los Angeles River Drainage Area, 1872-1947 AUTHOR(S): Froelich, C. T. SOURCE: Los Angeles Department of Water and Power, Hydrologic Section, California. DATE: 05/01/49 Description of rain gages in the upper Los Angeles River ABSTRACT: area, with data and analysis. Includes monthly and annual rainfall. KEYWORDS: Oceanography & Meteorology precipitation California, South Coast Region, Subregion VIII, Subregion IX Historical Coastal Erosion, A Manual for Researching AUTHOR(S): Fulton, K. Report No. T-CSGCP-003, University of California, Santa Cruz, SOURCE: California, Sea Grant College Program Publication, U.S. Dept. of Commerce, NOAA, and California State Resources Agency, 56 pp. DATE: 01/01/81 This manual is intended to help land-use planners, ABSTRACT: geologists, engineers, and others concerned with coastal erosion to collect historical information about shoreline, sea bluff, and cliff retreat. The manual emphasizes cross-correlation between sources and careful interpretation of data to rigorously document historical coastal changes in California over the last 100 to 500 years. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, wave climate, shoreline changes, maps, institutions/planning/mgmt. California, South Central Region, Report on Data From the Nearshore Sediment Transport Study Experiment at Torrey Pines Beach, California, November-December, 1978 AUTHOR(S): Gable, C. G., Ed. SOURCE: SIO Reference 79-8, Scripps Institution of Oceanography, La Jolla, California, 90 pp. DATE: 01/01/79 ABSTRACT: Major emphasis was on characterization of the nearshore velocity

field in relation to the incident wave field. Other objectives were to obtain measurements of longshore transport rates by means of tracer studies and on-offshore transport by means of profile analysis, and evaluate promising techniques for contin- uous point measurements of suspended sediment and bedload transport concurrently with the measurement of the local velocity field. Includes data. KEYWORDS: Coastal Processes littoral sediment, longshore transport, California, San Diego Region, Subregion X, Oceanside Cell Report on Data from the Nearshore Sediment Transport Experiment at Leadbetter Beach, Santa Barbara, California AUTHOR(S): Gable, C. G., Ed. SIO Reference No. 80-5, Jan-Feb. 1980, R. J. Seymour, NSTS SOURCE: Program Manager; Scripps Institution of Oceanography, La Jolla, California, 314 pp. DATE: 01/01/81 ABSTRACT: This document was prepared to provide investigators, who were not involved with the conduct of this experiment, with the following information: purpose and objectives of this experiment and its relationship to the overall NSTS program; details of the physical setting necessary to evaluate the significance of the various measurements; a precise identification of the kinds of measurements obtained, etc.; sufficient information to extract meaningful data from the magnetic data tapes and data tables; and how to order the data tapes that supplement this report. KEYWORDS: Coastal Processes littoral sediment, longshore transport, beach profiles, wave climate California, South Central Region, Subregion VII, Santa Barbara Cell Longshore Current Velocity: A Review of Theory and Data AUTHOR(S): Galvin, C. J. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Reprint 2-68, pp. 287-304 DATE: 08/01/67 Field and laboratory observations for description of ABSTRACT: longshore current flow. Evaluates theories proposed to predict longshore current velocity. Selective, emphasizing recent results. KEYWORDS: Coastal Processes longshore current California Effect of Source Orientation and Location in the Peru-Chile Trench on Tsunami

Amplitude Along the Pacific Coast of the Cont- inental United States

AUTHOR(S): Garcia, A. W. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Research Report H-76-2, 20 pp. DATE: 09/01/76 ABSTRACT: An idealized axis of the Peru-Chile Trench was divided into 12 sequents of equal length. A hypothetical bottom displacement which generates a tsunami with intensity approximately equal to four was centered in three of the segments. An explicit finite difference numerical code was used to simulate genera- tion and propagation of the resulting tsunami to the West Coast of the continental United States. Additionally, the tsunami of May 22, 1960 was simulated and comparison made to gage records at selected open coast locations along the Pacific Coast. Contour plots of surface elevation of the few leading KEYWORDS: Coastal Processes tsunamis California, Oregon, Mexico Beach Nourishment Techniques, Report 2; A Means of Predicting Littoral Sediment Transport Seaward of the Breaker Zone AUTHOR(S): Garcia, A. W.; Perry, F. C., Cpt. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report H-76-13, 58 pp. DATE: 10/01/76 ABSTRACT: A method of determining, as a function of water depth, the amount of sediment entrained into the longshore current regime seaward of the breaker zone is developed. The objective is the nourishment of beaches by offshore dumping of sediment such as by hopper dredge. A summary and general description of previous related investigations are included. Wave hindcast data compiled by National Marine Consultants for the years 1956, 1957, and 1958, were used as input to the method for verifica- tion. The site of verification was Point Pedernales (approxi- mately 2 miles north of Point Arguello), California. Figures showing the computed and measured longshore sediment transport KEYWORDS: Coastal Processes, Hydrology & Hydraulics beach nourishment/dredging, littoral sediment, longshore current, longshore transport, offshore/onshore transport California, South Central Region, Subregion VI, Santa Ynez River Cell Bottom Samples Off the Coast of California AUTHOR(S): Garrison, L. E.; Takasaki, K. J. SOURCE: SIO Reference Series No. 50-19, Submarine Geology Report No. 12. Scripps Institution of Oceanography, La Jolla, California, 19 pp.

DATE: 08/01/50 ABSTRACT: Charts have been prepared showing the location of the bottom samples taken by Scripps Institution and the U. S. Coast and Geodetic Survey off the coast of Southern California up to 1939. The data from analyses of most of these samples have been plotted on the charts in an attempt to consolidate information gained by earlier bottom sampling. Four charts and an index map. KEYWORDS: Coastal Processes, Geomorphology littoral sediment, sedimentation, petrology California, South Central Region, South Coast Region, San Diego Region Damage Producing Winter Storms of 1978 and 1980 in Southern California, Α Synoptic View. AUTHOR(S): Garza, C.; Peterson, C. SOURCE: In: Storms, Flood and Debris Flows in Southern California and Arizona, 1978 and 1980, National Academy Press, Washington, D. C., pp. 43-56 DATE: 09/17/80 ABSTRACT: Synoptic overview of rainfall producing storms in 1978 and 1980. Finds the two storm seasons were quite different, with the 1980 season producing a stable wave action which produced a series of moderate intensity storms. KEYWORDS: Oceanography & Meteorology precipitation, storms/floods California, South Central Region, South Coast Region, San Diego Region Sediment Distribution On the Shelf, Slope and in Two Submarine Canyons of the Gaviota Area, Santa Barbara County, California AUTHOR(S): Gatto, L. W. SOURCE: M. S. Thesis, University of Southern California, Los Angeles, California, 184 pp. DATE: 01/01/70 ABSTRACT: Contrasts and compares sediments from shelf, slope and submarine canyon samples in the Gaviota area, Santa Barbara. KEYWORDS: Geomorphology, Coastal Processes geomorphic processes, grain size, petrology, sedimentation, submarine canyons, geology California, South Central Region, Subregion VII, Santa Barbara Cell Nearshore Ocean Currents Off San Diego, California AUTHOR(S): Gaul, R. D.; Stewart, H. B. SOURCE: Journal of Geophysical Research, Vol. 65, No. 5, pp. 1543-1556 DATE: 01/01/60 ABSTRACT: not reviewed KEYWORDS: Coastal Processes nearshore currents, coastal currents California, San Diego Region, Subregion X, Oceanside Cell, S. Oceanside Reach,

Mission Bay Cell, S. Mission Bay Reach, Silver Strand Cell Santa Ana: Flood Control Planning in the Coastal Zone AUTHOR(S): Getzen, B. B. SOURCE: Coastal Zone '83, Symposium, San Diego, California, June 1-4, 1983; ASCE, N. Y., Vol. II, pp. 1734-1742 DATE: 01/01/83 ABSTRACT: Public perception and political interest difficulties encountered during the planning and decision-making for the coastal zone impacts of the Santa Ana River project. A case study. KEYWORDS: Coastal Processes, Socioeconomics environmental constraints, institutions/planning/mgmt. California, South Coast Region, Subregion IX, San Pedro Cell Rainfall - Can It Be Predicted Over The Long Term? AUTHOR(S): Glantz, J. Weatherwise, Vol. 34, No. 2, pp. 66-20 SOURCE: DATE: 04/01/81 ABSTRACT: Examines rainfall patterns in the San Fernando Valley, from 1879-1980. Finds no consistent patterns (no 30 year or 15 year patterns). Finds no relationship to land-use patterns Includes graphs, tables, and small reference list. KEYWORDS: Oceanography & Meteorology precipitation California, South Coast Region, Subregion VIII, Subregion IX Sand and Gravel in California, An Inventory of Deposits, Part B, Central California AUTHOR(S): Goldman, H. B. SOURCE: Bulletin 180-B, California Division of Mines and Geology, Sacramento, California, 58 pp. DATE: 01/01/64 Sand and gravel occurs in the stream beds, floodplain, ABSTRACT: terraces and alluvial fans of the major streams of the central California counties covered in this report. The locations and extent of the deposits are shown in the accompanying map. KEYWORDS: Geomorphology geology, maps, mining, river-bed sediment, watershed sediment California, South Central Region, Subregion VI Significance of Statistical Parameters in the Environmental Interpretation of Beach Sediments AUTHOR(S): Gonzalez, O. J. SOURCE: M. A. Thesis, University of California, Los Angeles, California, 200 pp. DATE: 01/01/70

ABSTRACT: Winter and summer samples were collected over a 200 x 55 meter section of beach at Leo Carillo State Beach. Analysis included texture and mineralogy along with statistical measures. KEYWORDS: Geomorphology, Coastal Processes beaches, littoral sediment, geomorphic processes, petrology California, South Central Region, Subregion VII, Santa Monica Cell Windstorms in California AUTHOR(S): Goodridge, J. D.; Rhodes, H.; Bingham, E. G. California Department of Water Resources, Planning Division, SOURCE: Sacramento, California, 34 pp. DATE: 12/01/75 ABSTRACT: Data tables of strong winds in California for 68 stations. Includes tables by month, station and frequency of strong winds, extreme values by year and location. KEYWORDS: Oceanography & Meteorology wind California, South Central Region, South Coast Region, San Diego Region Wind in California AUTHOR(S): Goodridge, J. D.; Bingham, E. G. SOURCE: Bulletin No. 185, State of California, Department of Water Resources, Sacramento, California, 267 pp. DATE: 01/01/78 ABSTRACT: A summary of readily available wind data. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology wind, wind transport California Wind in California AUTHOR(S): Goodridge, J. D.; Bingham, E. G. Bulletin No. 185, State of California, Department of Water SOURCE: Resources, Sacramento, California, 267 pp. DATE: 01/01/78 ABSTRACT: A summary of readily available wind data. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology wind, wind transport California Historical Extreme Annual Rainfall Data in California AUTHOR(S): Goodridge, J. D. In: Storms, Floods, and Debris Flows in Southern California SOURCE: and Arizona, 1978-1980, National Academy Press, Washington, D. C., pp 57-76 DATE: 09/17/80 ABSTRACT: Statistical analysis of precipitation data from 740 recording gages and 1450 non-recording gages in California. Presents extreme value analysis. KEYWORDS: Oceanography & Meteorology precipitation

California

Maximum Daily Precipitation by Months AUTHOR(S): Goodridge, J. D. SOURCE: California Department of Water Resources, Planning Division, Sacramento, California, 36 pp. and 8 microfiche DATE: 10/10/80 ABSTRACT: Data from 1,100 stations (32,000 station years), giving maximum daily rainfall by month and year for California stations (includes station name, location, latitude, longitude). Also gives results of frequency analysis bv month for 2 year to 1,000 year events, and other statistical results. KEYWORDS: Oceanography & Meteorology precipitation California Rainfall Depth, Duration and Frequency for California AUTHOR(S): Goodridge, J. D. SOURCE: California Department of Water Resources, Planning Division, Sacramento, California, 3600+ pp. DATE: 02/01/81 ABSTRACT: Presents data from 689 recording and 853 non-recording gages. Over 3600 pages of data on attached microfiche. Gives discussion of gages, accuracy, precision, data analysis maps. KEYWORDS: Oceanography & Meteorology precipitation California, South Central Region, South Coast Region, San Diego Region California Rainfall Summary, Monthly Total Precipitation 1849-1980 AUTHOR(S): Goodridge, J. D. California Department of Water Resources, Planning Division, SOURCE: Sacramento, California, 43+ pp. DATE: 07/01/81 ABSTRACT: A summary of California precipitation. Data from more than 4,000 stations are included on mircofiche. Excellent source of an enormous quantity of data. KEYWORDS: Oceanography & Meteorology precipitation California Global Sea Level Trend in the Past Century AUTHOR(S): Gornitz, V.; Lebedeff, S.; Hansen, J. SOURCE: Science, Vol. 215, pp. 1611-1614 DATE: 03/26/82 ABSTRACT: Data derived from tide-gage stations throughout the world indicate that the mean sea level rose by about 12 centimeters in the past century. The sea level change has a high correlation with the trend of global surface air

temperature. A large part of the sea level rise can be accounted for in terms of the thermal expansion of the upper layers of the ocean. The results also represent weak indirect evidence for a net melting of the continental ice sheets. KEYWORDS: Coastal Processes sea level change California Marine Geology of San Pedro and Santa Monica Basins and Vicinity, California AUTHOR(S): Gorsline, D. S. SOURCE: Ph.D. Dissertation, University of Southern California, Los Angeles, California, 301 pp. DATE: 01/01/58 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geology California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, San Pedro Cell Turbidity-Current Deposits in San Pedro and Santa Monica Basins Off Southern California AUTHOR(S): Gorsline, D. S.; Emery, K. O. SOURCE: Bulletin of the Geological Society of America, Vol. 70, No. 3, pp. 279-297 DATE: 01/01/59 ABSTRACT: not reviewed KEYWORDS: Coastal Processes littoral sediment, coastal currents, sand entrapment, nearshore currents, sedimentation, submarine canyons California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, San Pedro Cell Marine Geology of the California Continental Borderland AUTHOR(S): Gorsline, D. S. SOURCE: Geology Department Report 68-1, University of Southern California, Los Angeles, California, 92 pp. DATE: 01/01/68 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geology California Mineral Composition of River, Beach, and Shelf Sands From Point Conception, California, to the Mexican Border AUTHOR(S): Gorsline, D. S. SOURCE: Abstracts for 1968, Geological Society of America, p. 115 DATE: 01/01/68 ABSTRACT: Sand mineral composition is identified and analysed.

KEYWORDS: Geomorphology, Coastal Processes geomorphic processes, littoral sediment, petrology, river-bed sediment California, South Central Region, South Coast Region, San Diego Region, Subregion VII, Subregion VIII, Subregion IX, Subregion X Sediment Textural Patterns on San Pedro Shelf, California (1961-1971); Reworking and Transport by Waves and Currents AUTHOR(S): Gorsline, D. S.; Grant, D. J. SOURCE: In: Shelf Sediment Transport: Process and Pattern, D. J. Swift, D. B. Duane & O. H. Pilkey, Eds., Dowden, Hutchinson & Ross, Inc., Stroudsberg, Penna., pp. 575-600 DATE: 01/01/72 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology coastal currents, sedimentation, nearshore currents, petrology, wave climate California, South Coast Region, Subregion IX, Santa Monica Cell, S. Santa Monica Reach, San Pedro Cell Secular Fluctuations of Seasonal Precipitation of Lowland California AUTHOR(S): Granger, O. E. Monthly Weather Review, Vol. 104, No. 4, pp. 386-397 SOURCE: DATE: 04/01/77 ABSTRACT: Investigates patterns in precipitation in California, including four Southern California stations. Used regression and power spectral analysis and found no significant trends. Found no significant periodicity. Finds migration of wet/dry periods related not just to zonality of upper atmosphere velocities, but perhaps wave-length, position or orientation of troughs and ridges. Suggests shor records are dangerous for forecasting and design. KEYWORDS: Oceanography & Meteorology precipitation California, South Central Region, South Coast Region, San Diego Region Sediments of the San Pedro Shelf AUTHOR(S): Grant, D. J. M. S. Thesis, University of Southern California, Los Angeles, SOURCE: California, 93 pp. DATE: 02/01/73 ABSTRACT: The sediments of the San Pedro shelf were studied in order to determine the pattern of sedimentation and its relationship to the various oceanographic agents at work in the area. KEYWORDS: Geomorphology, Coastal Processes coastal currents, geology, grain size, maps, littoral sediment California, South Coast Region, Subregion IX, San Pedro Cell Inventory and Evaluation of California Coastal Recreation and Aesthetic Resources, Three Volume Final Report AUTHOR(S): Granville Corporation, The SOURCE: POCS Tech. Paper No. 81-5, BLM Contract No. AA-851-CTO-63, U.S. Dept.

of Interior, Bureau of Land Management, Pacific OCS Office, Los Angeles, California, 500 + pp. each Volume DATE: 05/27/81 ABSTRACT: Includes: the coastal and offshore recreation activities and resources for entire California coastline; projections, aesthetic resource evaluation, economic values of recreation and aesthetic resources; multiple linear regression methods to derive beach use projections, boat registration, and sport fishing, and includes scuba, beach parking, and aesthetic rating sheets. Includes data. KEYWORDS: Coastal Processes, Socioeconomics beaches, coastal structures, California, South Central Region, South Coast Region, San Diego Region Impact of 1983 Storms on the Coastline of Northern Monterey Bay, Santa Cruz County AUTHOR(S): Griggs, G. B.; Johnson, R. E. California Geology, California Division of Mines and Geology, SOURCE: Sacramento, California, Vol. 36, No. 8, pp. 163-174 DATE: 08/01/83 ABSTRACT: A geological summary of Northern Monterey Bay area, and historical view of erosion. Includes a storm history; number of storms effecting the bay is large and waves which damage one section may cause little or no damage elsewhere. KEYWORDS: Oceanography & Meteorology precipitation, storms/floods California The Statistical Description of Average Wave Conditions Near the Entrance of San Diego Bay AUTHOR(S): Groves, G. W. SOURCE: SIO Reference 53-63, Wave Report No. 102, Scripps Institution of Oceanography, La Jolla, California, 18 pp. DATE: 12/10/53 ABSTRACT: The average ocean wave conditions at two locations near the entrance of San Diego Bay are described in terms of the frequencies, in percentage of time, that the height, period, and direction of the 'significant' waves lie within various ranges of values. The bottom pressure, bottom orbital velocity and displacement due to the surface waves are described at the two locations in the same manner as the wave height. The seasonal and other variations of the wave characteristics are shown. Includes data. KEYWORDS: Coastal Processes wave climate

California, San Diego Region, Subregion X, Silver Strand Cell Suspended Sediment and Plankton Over San Pedro Basin, California AUTHOR(S): Gunnerson, C. G.; Emery, K. O. SOURCE: Limnological Oceanography, No. 1, pp. 14-20 DATE: 01/01/62 ABSTRACT: not reviewed KEYWORDS: Coastal Processes littoral sediment, sedimentation California, South Coast Region, Subregion IX, San Pedro Cell Eastern North Pacific Tropical Cyclones 1983 AUTHOR(S): Gunther, C. B.; Cross, R. L. SOURCE: Mariners Weather Log, Vol. 28, No. 2, 1984, pp. 57-78 DATE: 01/01/84 ABSTRACT: Presents storm tracks and data for 1983 tropical storms and includes descriptions of each storm. KEYWORDS: Oceanography & Meteorology storms/floods California, South Central Region, South Coast Region, San Diego Region Eastern North Pacific Tropical Cyclones, 1977 AUTHOR(S): Gunther, E. B. SOURCE: Mariner's Weather Log No. 22(3), U. S. Department of Commerce, NOAA, National Weather Service, Eastern Pacific Hurricane Center, Redwood City, California, pp. 157-166 DATE: 05/01/78 ABSTRACT: The number of tropical cyclones reaching storm or hurricane intensity is compared by years. Damages were less than in other years. Flooding caused by Hurricane Doreen along the southern California coast is compared to that produced by Hurricane Kathleen in 1976. Daily movie loops were provided along with 1/2-hour reports of visual and IR data obtained from satellites. KEYWORDS: Coastal Processes, Oceanography & Meteorology storms/floods, storm waves California, Oregon, Mexico Changes in Sea Level, Postglacial Uplift, and Mobility of the Earth's Interior AUTHOR(S): Gutenberg, B. SOURCE: Geological Society of America Bulletin, Vol. 52, pp. 721-772 DATE: 01/01/41 Record of tide gauges indicate that sea level generally is ABSTRACT: rising at an average rate of about 10 cm per century. The uplift in North America is investigated, and maps showing the rate of uplift are given. Changes in bench marks for San Diego are included as part of the data for this report. KEYWORDS: Geomorphology geomorphic processes, neotectonics, sea level change, tides California, San Diego Region, Subregion X, Oceanside Cell

Edge Waves and Beach Cusps AUTHOR(S): Guza, R. T.; Inman, D. L. SOURCE: Journal of Geophysical Research, Vol. 80, No. 21, pp. 2997-3012 DATE: 07/20/75 ABSTRACT: Genetically, beach cusps are of at least two types; those linked with incident waves, and those generated on beaches. The spacings of some cusps formed under reflective wave conditions both in the laboratory and in certain selected natural situa- tions are shown to be consistent with models. Experiments show that visible subharmonic edge wage generation occurs on nonerodable plane laboratory beaches only when the incident waves are strongly reflected at the beach, and this observation is quantified. Cusp growth is limited by negative feedback from the cusps to the edge wave excitation process. Small edge waves can form longshore periodic morphologies by providing destabilizing perturbations on a berm property located in the swash zone. In this case the retreating incident wave surge KEYWORDS: Coastal Processes wave climate, wave transformation, beaches, nearshore currents, offshore/onshore transport California Variability of Longshore Currents AUTHOR(S): Guza, R. T.; Thornton, E. B. SOURCE: Proceedings of the 16th Coastal Engineering Conference, Hamburg, West Germany, Aug. 28-Sept. 1, 1978; ASCE, N. Y., pp. 756-775 DATE: 01/01/78 ABSTRACT: Simultaneous measurements were made of the offshore directional spectra of gravity waves and longshore currents within the surf zone. The goal was to test theories which suggest a direct relationship between mean longshore current in the surf zone and offshore values of the off-axis component of radiation stress. A large-scale experiment was conducted at Torrey Pines Beach near San Diego, California. KEYWORDS: Coastal Processes longshore current, nearshore currents, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Local and Shoaled Comparisons of Sea Surface Elevations, Pressures, and Velocities AUTHOR(S): Guza, R. T.; Thornton, E. B. SOURCE: Journal of Geophysical Research, Vol. 85, No. C3, pp. 1524-1530 DATE: 01/01/80 ABSTRACT: Sea surface elevations, or pressures, and velocities were measured

at closely spaced (wavelength or less) locations in a line extending from 10 meter depth to inside the surf zone at Torrey Pines Beach, San Diego. Intercomparisons of local pressure, velocity, and sea surface elevation spectra for the wind wave frequencies were made by using linear wave theory. KEYWORDS: Coastal Processes wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Wave Set-Up on a Natural Beach AUTHOR(S): Guza, R. T.; Thornton, E. B. Journal of Geophysical Research, Vol. 86, No. C5, pp. 4133-4137 SOURCE: DATE: 05/20/81 ABSTRACT: Wave set-up, the superelevation of mean water level owing to the presence of breaking incident waves, was measured at the shoreline of a natural beach. Offshore pressure sensors monitored incident wave conditions. Experiments conducted at Torrey Pines Beach, California. KEYWORDS: Coastal Processes wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell On the Amplitude of Beach Cusps AUTHOR(S): Guza, R. T.; Bowen, A. J. SOURCE: Journal of Geophysical Research, Vol. 86, No. C5, pp. 4125-4132 DATE: 05/20/81 ABSTRACT: There is increasing evidence from field observations that beach cusps are often formed by subharmonic edge waves, edge waves which are generated by an instability in the incoming wind waves. A theoretical analysis suggests that the changing beach topography as the cusps grow provides a negative feedback to the excitation of the subharmonic edge waves. As the cusps grow, the edge waves subside. A maximum cusp amplitude is calculated, based on the assumption that some edge wave activity must persist to maintain the cusps. KEYWORDS: Coastal Processes beach profiles, longshore transport, offshore/onshore transport, wave climate, wave transformation California Ocean Wave Statistics for the California Coast AUTHOR(S): Habel, J. S. SOURCE: Shore & Beach, Vol. 43, No. 3, p. 3 DATE: 01/01/77 ABSTRACT: not reviewed KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Geomorphology and Sedimentary Characteristics of Redondo Submarine Fan,

Southern California AUTHOR(S): Hackett, B. E. SOURCE: Master's Thesis, University of Southern California, Los Angeles, California, 146 pp. DATE: 01/01/70 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology sedimentation, submarine canyons, petrology California, South Coast Region, Subregion VIII, Santa Monica Cell Emergency Erosion Protection and Contingency Planning for Los Angeles County AUTHOR(S): Hale, J. SOURCE: Shore & Beach, Vol. 47, No. 2, pp. 31-34 DATE: 04/01/79 Technical and administrative methods of the Los Angeles ABSTRACT: County program for erosion control which involves making shoreline statistics available and establishing a training program are discussed. Among the technical uses of the data is the calculation of net change of sand movement, indicating whether the shoreline is eroding or accreting or simply oscillating. The movement of the area of the beach in the uprush zone is determined. KEYWORDS: Coastal Processes coastal erosion, institutions/planning/mgmt., longshore transport, offshore/onshore transport, beach profiles, shore protection California, South Coast Region, Subregion VIII Transmission of the Wave Energy Through and Overtopping of Long Beach, California, Breakwater - Final Report AUTHOR(S): Hales, L. Z. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Misc. Paper H-76-10, 65 pp. DATE: 05/01/76 ABSTRACT: A 10-15 year harbor expansion program for the ports of Los Angeles and Long Beach, California has been designed to provide increased amount of terminal space and berthing areas by dredg- ing and landfill construction in the Outer Harbor, with the landfill proposed to lie parallel with the San Pedro Bay middle breakwater, leaving a 1,000 foot wide channel between the breakwater and the landfill. Concern over the resulting wave condi- tions in the channel predicated an agreement between the City of Long Beach and the U.S. Army Engineers Waterways Experiment Station to conduct two-dimensional wave flume tests to experi- mentally determine the resulting wave climate for a range of KEYWORDS: Coastal Processes, Hydrology & Hydraulics coastal structures, wave climate, wave transformation

California, South Coast Region, Subregion IX, San Pedro Cell Preliminary Evaluation of Wind and Wave Effects of Potential LNG Terminal Sites, State of Calif., App.B: Wave Climate at Six Offshore Sites AUTHOR(S): Hales, L. Z. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Misc. Paper H-78-2, 416 pp. DATE: 07/01/78 ABSTRACT: The U. S. Army Engineer Waterways Experiment Station (WES) was requested to assist in the preliminary evaluation of the wave climate at alternative potential LNG terminal sites by applying existing hindcast wave data of a general nature to obtain estimates of the times of excessive wave conditions at the various sites. After the preliminary evaluation was completed, WES analyzed the effects of island sheltering and topographic influences on the wave climate of five onshore sites (Appendix A of H-78-2) and six offshore sites to provide a more refined estimate of the wave conditions existing at the potential KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation, wind, storm waves California, South Central Region, South Coast Region, Subregion VII, Subregion X Coastal Processes Study of the Oceanside, California Littoral Cell, Final Report AUTHOR(S): Hales, L. Z. SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District; Waterways Experiment Station, Vicksburg, Miss., WES Misc. Paper H-78-8, 464 pp. DATE: 08/01/78 ABSTRACT: Persistent erosion of the beaches south of the Oceanside Harbor and Del Mar Boat Basin with accompanying accretion of sand in the harbor and entrance channel, has been a continuing problem since the construction of the Del Mar Boat Basin and the prot- ective breakwaters. To eliminate these problems, certain engineering works of improvement have been proposed: addition- al breakwater systems, beach fill, and sand-by-passing procedures. The U. S. Army Corps of Engineers, Los Angeles District, requested WES to perform an independent analysis using the latest ocean wave statistical data to ascertain quantitatively KEYWORDS: Coastal Processes coastal erosion, coastal structures, littoral sediment, longshore transport, sand entrapment, shore protection California, San Diego Region, Subregion X, Oceanside Cell Mission Bay, California, Littoral Compartment Study, Final Report AUTHOR(S): Hales, L. Z. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station,

Vicksburg, Miss., WES Misc. Paper HL 79-4, 225 pp. DATE: 04/01/79 ABSTRACT: Four separate and distinct major problems exist at Mission Bay proper at the present time, with an additional beach erosion and bluff collapse condition occurring at Sunset Cliffs. The major problems include: condition at the jettied entrance produced by frequent breaking waves; short period waves of excessive height in Quivira Basin; long period seiche or surge in Quivira Basin and other locations within Mission Bay; and complete closure of the exit of the San Diego River floodway by littoral material, trapped between the middle and south jetties. Knowledge of the amount of littoral material which is moving past the entrance channel to the Bay was required, KEYWORDS: Coastal Processes, Hydrology & Hydraulics longshore transport, wave climate, wave transformation, tidal inlets, sand entrapment, sedimentation California, San Diego Region, Subregion X, Mission Bay Cell Littoral Processes Study, Vicinity of Santa Ana River Mouth From Anaheim Bay to Newport Bay, Final Report AUTHOR(S): Hales, L. Z. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report HL-80-9, 107 pp. DATE: 06/01/80 Study investigates erosion of beach immediately east of ABSTRACT: Anaheim Bay (Surfside-Sunset Beach) and the optimum location and distribution of 1 million cu.yd. of material suitable for beach nourishment; designs a tidal flow system to allow for flooding and emptying a marsh development north of Pacific Coast Highway, and designs feasibility concepts for maintaining an opening at the mouth of the Santa Ana River. Includes data. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal erosion, littoral sediment, longshore transport, tidal inlets California, South Coast Region, Subregion IX, Floating Breakwaters - State-of-the-Art Literature Review AUTHOR(S): Hales, L. Z. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Tech. Report No. 81-1, 279 pp. DATE: 08/01/81 ABSTRACT: A multitude of conceptual models of floating breakwaters have been

proposed without extensive or complete evaluation of most of these concepts. The technical literature regarding floating breakwater applicability and design procedures is fragmentary and sometimes confusing. Clear, concise quidance does not always exist for those responsible for planning and developing wave protection measures which utilize floating breakwaters. This study reviewed and evaluated technical literature (theore-tical, field, and laboratory) on floating breakwaters. KEYWORDS: Coastal Processes coastal structures, wave climate California Geologic Map of the Morro Bay South and Port San Luis Quadrangles, San Luis Obispo County, California AUTHOR(S): Hall, C. A. Misc. Field Studies Map, MF-511, U. S. Dept. of Interior, SOURCE: Geological Survey, Reston, Virginia DATE: 01/01/73 Geologic map, scale 1:24,000. ABSTRACT: KEYWORDS: Geomorphology geology, maps California, South Central Region, Subregion VI, Morro Bay Cell Creative Shoreline Management Through Community Partnerships AUTHOR(S): Hall, J.; et al. SOURCE: For: American Shore and Beach Preservation Association Annual Meeting, Santa Cruz, California; published by City of Long Beach, California, 42 pp. DATE: 10/03/84 ABSTRACT: Beach erosion problems in eastern Long Beach. Includes data. KEYWORDS: Coastal Processes coastal erosion, institutions/planning/mgmt., shore protection California, South Coast Region, Subregion VIII, San Pedro Cell The Rayleigh Disk As a Wave Direction Indicator AUTHOR(S): Hall, J. V. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 18 DATE: 07/01/50 ABSTRACT: Principles of operation of Rayleigh Disk in a stream flow and wave systems. Its erratic behavior as a wave-direction gage under natural conditions at Long Branch, New Jersey, and at Huntington Beach, California, is discussed. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Coast Region, Subregion IX, San Pedro Cell

Artificially Nourished and Constructed Beaches

AUTHOR(S): Hall, J. V. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 29 DATE: 12/01/52 ABSTRACT: Criteria for design of artificially nourished beaches are outlined. Four types of artificial nourishment methods that have been tried in the U. S. are described: offshore dumping, stock- piling, continuous supply, and direct placement methods. These methods have been employed at Santa Barbara. California; Atlantic City and Long Beach, New Jersey; Palm Beach and South Lake Worth Inlet, Florida. A tabular record of artificially nourished and constructed beaches, including factors relating to their placement and economic life is included. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, shore protection California, South Central Region, Subregion VII, Santa Barbara Cell Seaward Limit of Significant Sand Transport by Waves: An Annual Zonation for Seasonal Profiles AUTHOR(S): Hallermeier, R. J. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC CETA No. 81-2, 23 pp. DATE: 01/01/81 ABSTRACT: Sand characteristics and annual wave statistics at a site are used to determine two water depths bounding a shoal zone on the beach profile. Zonation is based on two thresholds of wave- induced sand agitation, so that expected waves during a year have neither strong nor negligible effects on the sand bottom. Supplements SPM (1977) techniques for estimating seaward limit of significant sand transport. KEYWORDS: Coastal Processes longshore transport, wave climate, wave transformation, offshore/onshore transport, littoral sediment, petrology California, South Central Region, South Coast Region, San Diego Region Sand Transport Limits in Coastal Structure Designs AUTHOR(S): Hallermeier, R. J. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Reprint 83-8, pp. 703-716 DATE: 01/01/83 ABSTRACT: Effective structure geometries for controlling nearshore sand transport are examined in the context of a simplified profile zonation based on wave conditions and sand characteristics. The present review considers field

and laboratory evidence on trans- port rates and sedimentation patterns in sandy regions influenced by shore-normal groins, shore-parallel breakwaters, or jetties for coastal harbor entrances. KEYWORDS: Coastal Processes coastal structures, longshore transport, wave transformation, offshore/onshore transport, littoral sediment, petrology California, South Central Region, Rainfall Measurements as Influenced by Storm Characteristics in Southern California Mountains AUTHOR(S): Hamilton, E. L. SOURCE: American Geophysical Union, Vol. 25, Part III, pp. 502-518 DATE: 01/01/44 ABSTRACT: This report monitored over 173 storms producing a total of 251 inches of rain at 300 stations in San Dimas. Correlated rain and wind direction, and thus gives angle of wind with rain pattern. Storms with low-level winds from the south are great producers of rain; those with wind from the north are generally less intensive. Winds tend to be stronger with southerly (winds from south) storms. KEYWORDS: Oceanography & Meteorology precipitation, storms/floods California, South Coast Region, Subregion IX, San Pedro Cell Density and Porosity of Sea Floor Surface Sediments Off San Diego, California AUTHOR(S): Hamilton, E. L.; Menard, H. W. SOURCE: Amer. Assoc. of Petroleum Geologists Bulletin, Vol. 40, pp. 754-761 DATE: 01/01/56 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology sedimentation, petrology California, San Diego Region, Subregion X Turbidities and Topography of North End of San Diego Trough AUTHOR(S): Hand, B. M.; Emery, K. O. SOURCE: na DATE: 01/01/64 ABSTRACT: not reviewed KEYWORDS: Coastal Processes sedimentation, submarine canyons California, San Diego Region, Subregion X Accretion of Beach Sand Behind a Detached Breakwater AUTHOR(S): Handin, J. W.; Ludwick, J. C. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 16, 14 pp. DATE: 05/01/50 ABSTRACT: The problem of sand transport by longshore current is clarified by observing effects of the detached offshore breakwater at Santa Monica,

California. Correlation is attempted between transporting power of longshore forces, median grain sizes of the beach sand, and the position of the breakwater. KEYWORDS: Coastal Processes coastal structures, longshore current, longshore transport, sand entrapment California, South Coast Region, Subregion VIII, Santa Monica Cell The Source, Transportation, and Deposition of Beach Sediments in Southern California AUTHOR(S): Handin, J. W. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 22, 113 pp. DATE: 03/01/51 ABSTRACT: Detailed description of beaches and coastal physiography from Carpenteria to Point Fermin, California. Submarine geology and wind and wave forces are given. Petrographic analysis of beach, stream, and dune sands is presented; sources of beach sediments are discussed. Discussion of transportation and deposition of beach sands (littoral drift). Includes data. KEYWORDS: Coastal Processes, Hydrology & Hydraulics littoral sediment, longshore transport, nearshore currents, sedimentation, wave climate, wind transport California, South Central Region, South Coast Region The Source, Transportation and Deposition of Beach Sediment in Southern California AUTHOR(S): Handin, J. W. SOURCE: Tech. Memo. 22, U. S. Army Coprs of Engineers, Beach Erosion Board, 113 pp. DATE: 03/01/51 ABSTRACT: A general coastal geology and physiography of Southern California (Sand Point to Palos Verdes). Gives a summary of supply (annual average) of sediment to beaches. Also includes discussion of winds and waves. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics river sediment discharge, wave climate, wind California, South Coast Region, Subregion VIII, Santa Monica Cell, S. Santa Monica Reach Some Data Points on Erosion and Flooding for Subsiding Coastal Regions AUTHOR(S): Hands, E. B. SOURCE: Proceedings of Symposium on Anaheim 1976 Land Subsidence, International Assoc. of Hydrological Sciences, Reading, Berkshire, England DATE: 01/01/77 ABSTRACT: not reviewed KEYWORDS: Coastal Processes

coastal erosion, coastal erosion problems, shoreline changes California, South Coast Region, Subregion IX, San Pedro Cell Morphology and Sediments of Redondo Submarine Fan, Southern California AUTHOR(S): Haner, B. E. SOURCE: Geological Society of America, Vol. 82, pp. 2413-2432 DATE: 09/01/71 ABSTRACT: A detailed survey of the processes acting upon a small contemporary submarine fan infilling a deep marine basin. Fan development has been positioned at the junction of the flat basin floor and a narrow steepwalled fault- controlled submarine canyon oriented normal to the trend of the local slope. The canyon is an active pathway for sediment transport from shelf to fan, with little net infilling of its own axial floor. KEYWORDS: Geomorphology, Coastal Processes geomorphic processes, maps, submarine canyons, littoral sediment, offshore/onshore transport California, South Coast Region, Redondo Submarine Canyon and Fan System AUTHOR(S): Haner, B. E. SOURCE: In: Guide Book to Selected Features of the Palos Verdes Peninsula and Long Beach, California; South Coast Geologic Society, Tustin, California, pp. 50-53 DATE: 01/01/74 Analysis and interpretation of longitudinal fan profiles, ABSTRACT: channel morphology, and sediments on the fan surface and within the active channel indicate a three-fold division of the present fan environment. An analogy can be drawn with the development of alluvial fans in similar tectonic areas. The study is based on geophysical and sedimentological data. KEYWORDS: Geomorphology geology, geomorphic processes, littoral sediment, submarine canyons California, South Coast Region, Subregion VIII, Santa Monica Cell The Climatology and Nature of Tropical Cyclones of the Eastern North Pacific Ocean AUTHOR(S): Hansen, H. L. SOURCE: Masters Thesis, Naval Postgraduate School, Monterey, California, 178 pp. DATE: 09/01/72 ABSTRACT: Uses satellite coverage to document tropical cyclone activity in the Eastern North Pacific. Gives climatology of these storms in terms of frequency, duration, intensity, areas of formation and dissipation, track, speed and recurvature.

KEYWORDS: Oceanography & Meteorology climatology, storms/floods, wind California, South Central Region, South Coast Region, San Diego Region Diffraction of Water Waves by Isolated Structures AUTHOR(S): Harms, V. W. SOURCE: Journal of Waterway, Port, Coastal, and Ocean Divn., Vol. 105, NO. WW2; ASCE, N. Y., pp. 131-147 DATE: 05/01/79 ABSTRACT: Effect of various offshore structures as significant barriers to normal wave progress, diffraction characteristics, current alteration, and sediment redistribution. KEYWORDS: Coastal Processes coastal structures, wave transformation, nearshore currents, sand entrapment, sedimentation California, South Central Region, South Coast Region, San Diego Region Characteristics of Wave Records in the Coastal Zone AUTHOR(S): Harris, D. L. U. S. Army Corps of Engrs. Coastal Engrg. Res. Ctr., Vicksburg, SOURCE: Miss., Reprint 2-73; and Waves On Beaches, and Resulting Sediment Transport, Academic Press, Inc., N. Y., 1972, pp. 1-51 DATE: 01/01/73 ABSTRACT: Wave recordings are examined to evaluate the quality of wave data available from instruments and photographs and to detemine the extent to which the record analyses confirm or contradict speculation about wave characteristics published before many instrumental wave records were generally available. Includes data. KEYWORDS: Coastal Processes aerial photography, wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Tides and Tidal Datums in the United States AUTHOR(S): Harris, D. L. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Special Report No. 7, 382 pp. DATE: 02/01/81 ABSTRACT: Sea and land boundary variability factors are discussed with emphasis on the astronomical tides as the most predictable of the phenomena which affect sea level. Several tide datums are described, sources of information identified. Statistical characteristics of the astronomical tides at various U. S. ports are investigated and documented with graphs and tables. KEYWORDS: Coastal Processes sea level change, tides

California, South Central Region, South Coast Region, San Diego Region Study and Evaluation of Remedial Sand Bypassing Procedures, Final Report AUTHOR(S): Harris, R. W.; Inman, D. L.; Baillard, J. A.; Oda, R. L. SOURCE: Scripps Institution of Oceanography Report published by the U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., No. H-76-1, n. p. DATE: 05/01/76 ABSTRACT: A summary of the results of a laboratory and field investigation of remedial sand bypassing procedures including the crater-sink sand transfer system and associated jet pumps and fluidization procedures. Field test at Oceanside Harbor. Includes data. KEYWORDS: Coastal Processes beach nourishment/dredging, longshore transport, sand entrapment, coastal erosion, coastal erosion problems, shore protection California, San Diego Region, Subregion X, Landslides and Debris Flows in San Diego County, California AUTHOR(S): Hart, M. W. In: Earthquakes and Other Perils, San Diego Region, P. L. SOURCE: Abbott and W. J. Elliott, Eds., San Diego Association of Geologists, San Diego, California, pp. 167-182 DATE: 01/01/79 ABSTRACT: Describes landslides and debris flow. KEYWORDS: Geomorphology geology, maps, geomorphic processes California, San Diego Region, Subregion X, S. Oceanside Reach Pacific Summary Report, Outer Continental Shelf Oil and Gas Activities in the Pacific and Their Onshore Impacts AUTHOR(S): Havran, K. J. SOURCE: Contract No. 14-08-0001-19719, Prepared by Rogers, Golden, and Halpern, Reston, Va.; U. S. Dept. of Interior, Minerals Management Service, 104 pp. DATE: 09/01/83 ABSTRACT: This report summarizes the current offshore oil and gas activities and their onshore impacts in the Pacific region. It updates information contained in the prev- ious Pacific Summary Report of December, 1982. Includes data. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, growth potential/recreation, institutions/planning/mgmt., petrology, shore protection California, South Central Region, South Coast Region, Subregion VI, Subregion VII, Subregion VIII

Deadliest, Costliest, and Most Intense U. S. Hurricanes of This Century, and Other Frequently Requested Hurricane Facts AUTHOR(S): Hebert, P. J.; Taylor, G. SOURCE: U. S. Dept. of Commerce, National Hurricane Center, NOAA Tech. Memo 83012607, Coral Gables, Florida, 28 pp. DATE: 01/01/83 ABSTRACT: Lists of United States hurricanes which have caused 25 or more deaths and fifty million dollars or more in damages (unadjusted) during this century have been compiled from all data sources available at the National Hurricane Center. In addition, all major hurricanes which have made landfall in the United States during this century are listed. Some additional statistics on United States hurricanes of this century and tropical cyclones in general are also presented. KEYWORDS: Coastal Processes, Oceanography & Meteorology storm damage, storms/floods, storm waves California List of Seismic Sea Waves AUTHOR(S): Heck, N. H. Bulletin of the Seismological Society of America, Vol. 37, No. SOURCE: 4, pp. 269-286 DATE: 01/01/47 ABSTRACT: not reviewed KEYWORDS: Coastal Processes tsunamis California Seasonal Distribution of Magnetite and Illmenite in the Black Sand of Malaga Cove, California AUTHOR(S): Heintz, L. O. M. A. Thesis, University of Southern California, Los Angeles, SOURCE: California, 138 pp. DATE: 01/01/66 ABSTRACT: In 1961, 1962, and 1963, surveys of a portion of the black sand beach at Malaga Cove, California, included measurements of profiles for determining seasonal variations in beach erosion and accretion, and sampling of sands for analysis of grain size, mineral composition, and magnetite percentage. Profiles show maximum beach erosion in August and maximum accretion in January, contrary to the normal cycle of summer accretion and winter erosion for most beaches. KEYWORDS: Geomorphology, Coastal Processes

beach profiles, geology, geomorphic processes, grain size, littoral sediment, petrology California, South Coast Region, Subregion VIII, Santa Monica Cell Sedimentological Study of the Beach Between Oceanside and San Clemente, Orange and San Diego Counties, California AUTHOR(S): Heiple, L. J. SOURCE: M. S. Thesis, Colorado School of Mines, Golden, Colorado DATE: 01/01/79 ABSTRACT: not reviewed KEYWORDS: Coastal Processes sedimentation, beaches, littoral sediment, petrology California, South Coast Region, San Diego Region, Subregion IX, Subregion X, San Pedro Cell, Oceanside Cell Surf Statistics for the Coasts of the United States AUTHOR(S): Helle, J. R. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 108, 22 pp. DATE: 11/01/58 ABSTRACT: Visual observation of surf conditions including period, significant height and direction begun in 1954 at 27 stations located on U.S. coasts. Data on heights for the 3-year period 1954-1957 are summarized on a monthly basis and presented as cumulative frequency curves on an annual basis for each station. Stations include Point Arguello and Point Loma, California. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, San Diego Region Coastal Management: Readings and Notes AUTHOR(S): Herchman, M. J., Ed.; Feldmann, J. H., Ed. SOURCE: Coastal Resources Program, Institute for Marine Studies, University of Washington, Seattle, Washington, 806 pp. DATE: 01/01/79 ABSTRACT: This publication is designed primarily to serve graduate level survey courses in coastal management. The readings come from many disciplines including law, planning, public affairs, geography, economics, engineering, and ecology. It is based on course materials developed and collected in the principles of coastal zone management, and is a survey of the key concepts and problems of coastal management. KEYWORDS: Coastal Processes, Socioeconomics institutions/planning/mgmt. California, Oregon

Sand Bypassing at Santa Barbara Harbor AUTHOR(S): Herron, W. J. SOURCE: Coastal Engineering Specialty Conference, October, 1965, Santa Barbara, California, Chapter 35; ASCE, N. Y., p. 805 DATE: 10/01/65 ABSTRACT: Synopsis only. Construction to begin in 1967. KEYWORDS: Coastal Processes longshore transport, sand entrapment California, South Central Region, Subregion VII, Santa Barbara Cell Littoral Bypassing and Beach Restoration in the Vicinity of Port Hueneme, California AUTHOR(S): Herron, W. J.; Harris, R. L. SOURCE: Proceedings of 10th Conference on Coastal Engineering, ASCE, N. Υ. DATE: 01/01/66 ABSTRACT: not reviewed KEYWORDS: Coastal Processes beach nourishment/dredging, littoral sediment, longshore transport, coastal erosion, shore protection California, South Central Region, Subregion VII, Santa Barbara Cell Case History of Mission Bay Inlet, San Diego, California AUTHOR(S): Herron, W. J. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center Reprint 11-73; from Proceedings Coastal Engineering Conf. 1972, Vancouver, B.C., ASCE, N. Y., pp. 801-821 DATE: 07/01/73 ABSTRACT: The Mission Bay inlet was designed as a 'nonscouring' entrance channel by the Corps of Engineers, Los Aneles District in 1946. Construction of inlet was completed in 1959, the entire project in 1963. Project data and aerial photos are included. KEYWORDS: Coastal Processes coastal structures, estuarine sediment storage, sand entrapment, tidal inlets California, San Diego Region, Subregion X, Mission Bay Cell Artificial Beaches in Southern California AUTHOR(S): Herron, W. J. SOURCE: Shore & Beach, Vol. 48, No. 1, pp. 3-12 DATE: 01/01/80 ABSTRACT: not reviewed KEYWORDS: Coastal Processes beaches, beach nourishment/dredging, coastal structures, shore protection California, South Central Region, South Coast Region, San Diego Region The Influence of Man Upon the Shoreline of Southern California AUTHOR(S): Herron, W. J. SOURCE: Shore & Beach, Vol. 51, No. 3, pp. 17-27 DATE: 07/01/83

ABSTRACT: Benefits and adverse effects of coastal development. This paper addresses problems from viewpoint of engineer-planner. KEYWORDS: Coastal Processes beaches, coastal structures, growth potential/recreation, coastal erosion, shoreline use, urbanization California, South Central Region, South Coast Region, San Diego Region Miocene and Pliocene Inner Suprafan Channel Complex, San Clemente, California AUTHOR(S): Hess, G. R. SOURCE: Miocene Lithofacies and Depositional Environments, Coastal So. Calif. and Northwestern Baja Calif., Annual Mtg. Geological Soc. of America, Pac. Sec., SEPM, Los Angeles, Calif., pp. 99-105 DATE: 01/01/79 ABSTRACT: The details of the lithology of the coastal cliffs at San Clemente, California. KEYWORDS: Geomorphology cliff sediment, geology, maps California, San Diego Region, Subregion X, Oceanside Cell San Diego County Flood Hazard Investigation AUTHOR(S): Hightower, R. C.; Arnold, C. B.; Ryono, T. SOURCE: Bulletin No. 112, Department of Water Resources, the Resources Agency, State of California, Sacramento, California, 44+ pp. DATE: 03/01/64 ABSTRACT: Presents hydrology and flood characteristics for San Diego County. Includes flood hydrographs (average) and flood frequencies, along with peak flow data. Contains information on gaging. KEYWORDS: Hydrology & Hydraulics river discharge, stream gaging, storms/floods California, San Diego Region, Subregion X Geomorphology and Sedimentary Characteristics of Redondo Submarine Fan, Southern California AUTHOR(S): Hiner, B. E. SOURCE: M. S. Thesis, University of Southern California, Los Angeles, California DATE: 01/01/70 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology sedimentation, submarine canyons, geology, petrology California, South Coast Region, Subregion VIII, Santa Monica Cell Beach Nourishment Techniques, Report 3; Typical U. S. Beach Nourishment Projects Using Offshore Sand Deposits AUTHOR(S): Hobson, R. D. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report H-76-13, 117 pp. DATE: 05/01/81

ABSTRACT: This is a compendium of beach nourishment project characteristics for 20 typical U. S. shore segments for which the use of beach fill sediments from offshore borrow source areas has been suggested as a remedy for shore erosion. For each example project, the data provided consist of: history and description, location and bathymetry, fill and borrow site characteristics and specifications, design fill section, sediment grain size distribution, and fill calculations. KEYWORDS: Coastal Processes beach nourishment/dredging, littoral sediment, mining, beach profiles, sedimentation, shore protection California, South Coast Region, Subregion VII, Subregion VIII, Santa Monica Cell, San Pedro Cell Performance of a Sand Trap Structure and Effects of Impounded Sediments, Channel Islands Harbor, California AUTHOR(S): Hobson, R. D. U. S. Army Corps of Engineers, Coastal Engineering Research SOURCE: Center, Vicksburg, Miss., CERC Tech. Report 82-4, 38 pp. DATE: 10/01/82 ABSTRACT: Monitoring one complete filling cycle of a sand trap yielded textural and bathymetric data. Conducted at conclusion of CERC's longterm investigation relating longshore transport volumes to wave energy thrust measurements. Data collected: 28 vibratory cores of sediments, 8 cores from sites along a native beach profile, and 20 cores from sites within the trap. KEYWORDS: Coastal Processes littoral sediment, longshore transport, sand entrapment, wave climate, wave transformation, grain size California, South Central Region, Subregion VII, Santa Barbara Cell Projecting Future Sea Level Rise Methodology Estimates to the Year 2100, and Research Needs AUTHOR(S): Hoffman, J. S.; Keyes, D.; Titus, J. G. SOURCE: Environmental Protection Agency (EPA), Wash., D. C.; Second Edition, 121 pp. DATE: 10/24/83 ABSTRACT: Gives past data and estimates range of sea level rise. KEYWORDS: Coastal Processes sea level change California, Oregon, Mexico Wave Measurements Off Oxnard, California

AUTHOR(S): Hoffman, W. E.

SOURCE: Final Report No. NCEL-TN-530, Naval Civil Engineering Lab., Port Hueneme, California, 52 pp. DATE: 08/01/64 ABSTRACT: A description of a water level and wave measuring complex in about 18 feet of water behind and in the vicinity of an off- shore breakwater for a small craft harbor. The breakwater serves as a trap for sand which is by-passed periodically around jetties about one mile downshore. Instruments and methods are discussed for the complex as progressively improved over a 10-year period beginning in 1953. Types of measurements made are presented with typical daily averages. The beach and sea surface were recorded on photographs periodically. All data collected was sent to CERC for analysis and reporting. KEYWORDS: Coastal Processes wave climate, wave transformation, beaches, California, South Central Region, Subregion VII, Santa Barbara Cell Geology of the Eastern Part of the Santa Monica Mountains, Los Angeles, California AUTHOR(S): Hoots, H. W. SOURCE: Professional Paper 165-C, U. S. Dept. of Interior, Geological Survey, Washington D. C., 134 pp. DATE: 01/01/31 ABSTRACT: The overall geology of the mountains is given with data on the tectonic lithology of the rocks with some information on sand and gravel mining. KEYWORDS: Geomorphology geology, maps, mining California, South Coast Region, Subregion VIII, Santa Monica Cell Southern Hemisphere Swell and Waves from a Tropical Storm at Long Beach, California AUTHOR(S): Horrer, P. L. U. S. Army Corps of Engineers, Beach Erosion Board, Washington, SOURCE: D. C., BEB Bulletin Vol. 4, No. 3, 51 pp. DATE: 07/01/50 ABSTRACT: Characteristics of waves destructive to harbor breakwaters in the Long Beach-San Pedro area are examined for Southern Hemis- phere swell occurring in 1930, and waves from a tropical storm in the North Pacific in 1939. Refraction analyses are made and a hindcast of wave conditions which occurred in the 1939 storm is based on available weather data. Also see companion paper; O'Brien, M. P. (1950). KEYWORDS: Coastal Processes

coastal structures, storm surge, storm waves, storm damage, wave climate, wave transformation California, South Coast Region, Subregion IX, Southern Waves and Swell From A Tropical Storm at Long Beach, California AUTHOR(S): Horrer, P. L. SOURCE: Bulletin of the Beach Erosion Board, Vol. 4, No. 3, Washington, D. C., pp. 1-18 DATE: 07/01/50 ABSTRACT: An analysis of large damaging storm waves of 1930 and 1939 from tropical storms. Includes wave refraction diagrams and hindcasts, weather charts with wind speeds, and computation of wave generation. Also includes data. KEYWORDS: Oceanography & Meteorology storms/floods, wave climate, wind California, South Coast Region, Subregion IX, San Pedro Cell Type 16 Flood Insurance Study: Tsunami Predictions for Pacific Coastal Communities AUTHOR(S): Houston, J. R.; Garcia, A. W. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report H-74-3, 10 pp. DATE: 01/01/74 ABSTRACT: Calculation of runup due to seismic sea waves (tsunamis) of distant origin are made for 15 coastal communities within the State of California and 3 coastal communities within the State of Alaska. The combined effects of astronomical tides and tsunamis are incorporated into the analysis as well as local resonance effects where judged significant. Includes data. KEYWORDS: Coastal Processes tides, tsunamis, wave transformation California Effect of Source Orientation and Location in the Aleutian Trench on Tsunami Amplitude Along the Pacific Coast of the Con-tinental U.S. AUTHOR(S): Houston, J. R.; Whalin, R. W.; Garcia, A. W.; Butler, H. L. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Research Report H-75-4, 22 pp. DATE: 07/01/75 ABSTRACT: The investigation attempts to ascertain the effect of the orientation and location of elliptically shaped tsunamigenic ground displacements of earthquakes along the Aleutian Trench on resulting tsunami amplitude along the Pacific Coast. A numerical model was used to propogate the tsunami generated by an uplift to the Pacific Coast. An analytical solution of the governing equations of motion was used to propagate the tsunami from the

grid points of the numerical grid closest to land to a common water depth of 600 ft. so that there would be a standard KEYWORDS: Coastal Processes neotectonics, tsunamis, wave climate, wave transformation California, Oregon, South Central Region, South Coast Region, San Diego Region Tsunami Run-up Predictions for the West Coast AUTHOR(S): Houston, J. R. SOURCE: Coastal Zone '78, Vol. IV, ASCE, N. Y., pp. 2885-2896 DATE: 01/01/78 ABSTRACT: This paper describes the use of numerical models to propagate tsunamis from tsunamigenic regions to the west coast of the U.S. A method also is described that incorporates these deterministic numerical model calculations into a probabilistic analysis that allows elevation predictions at any location on the west coast. Includes data for Avila Beach. KEYWORDS: Coastal Processes tsunamis, wave climate California, South Central Region, South Coast Region, San Diego Region, Subregion VI, Morro Bay Cell Tsunami Predictions for the West Coast of the Continental United States, Type 16 Flood Insurance Study AUTHOR(S): Houston, J. R.; Garcia, A. W. SOURCE: Hydraulics Laboratory, U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report H-78-26, 35 pp. DATE: 12/01/78 Calculations of runup due to tsunamis of distant origin were ABSTRACT: made. Runup values determined were expected to be equaled or exceeded on the average of once per 100 and once per 500 years. Historical data of tsunami activity in distant generation regions were used in conjunction with numerical models that generated and propagated tsunamis. The combined effects of astronomical tides and tsunamis were also incorporated into the analysis. Numerical simulations of actual historical tsunamis and comparisons of calculations with tide gage recordings are presented. Calculations of tsunami runup based on data of local KEYWORDS: Coastal Processes tides, tsunamis, wave climate, wave transformation California, Oregon State-of-the-Art for Assessing Earthquake Hazards in the United States, Report 15, Tsunamis, Seiches, and Landslide-Induced Water Waves AUTHOR(S): Houston, J. R. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Misc. Paper S-73-1-15, 86 pp.

DATE: 11/01/79 ABSTRACT: State-of-the art methods are presented to assess the hazards of tsunamis, seiches, and landslide-induced water waves in the U.S. Tsunami hazard maps for the U.S. are shown that display tsunami elevation zones that have a 90 percent probability of not being exceeded in a 50-year period. Methods used to deter- mine forces exerted on structures by tsunamis are described. Hydrodynamic aspects of seiches and landslide-induced water waves are discussed, as well as methods of assessing the hazards associated with these phenomena. KEYWORDS: Coastal Processes tsunamis, wave climate, coastal structures, wave transformation California Tsunami Predictions for Southern California, Type 19 Flood Insurance Study, Final Report AUTHOR(S): Houston, J. R. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report HL-80-18, 32 pp. DATE: 09/01/80 ABSTRACT: Calculations of shoreline water elevations due to tsunamis of distant origin were made for the Southern California region. Includes data. KEYWORDS: Coastal Processes tides, tsunamis, wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Depositional Facies of High-Energy Beach-to-Offshore Sequence: Comparison with Low-Energy Sequence AUTHOR(S): Howard, J. D.; Reineck, H. SOURCE: American Association of Petroleum Geologists Bulletin, Vol. 65, No. 5, pp. 807-830 DATE: 01/01/81 This study of sedimentation on the high-energy California ABSTRACT: Shelf was undertaken to (1) examine and describe the primary physical and biogenic sedimentary structures, (2) define the beach-to- offshore depositional sedimentary sequence, and (3) compare this sequence with a lower energy, tide-dominated shoreline at Sapelo Island, Georgia. The Ventura-Port Hueneme area of the California coast represents a high-energy shoreline previously studied. KEYWORDS: Geomorphology geology, geomorphic processes, grain size, hydrographic surveys, littoral sediment California, South Central Region, Subregion VII, Santa Barbara Cell Erosion and Sedimentation as Part of the Natural System AUTHOR(S): Howard, R. B.

SOURCE: In: Symposium on the Dynamics and Management of Mediterranean-Type Ecosystems, June 22-26, 1981, San Diego Calif.; PSW Forest and Range Exp. Sta., Berkeley, Calif., Gen. Tech Rpt., pp.403-408 DATE: 06/22/81 ABSTRACT: Gives an overview of sedimentation problems in Southern California. particularly those related to fires. Includes a discussion of all major factors influencing erosion and gives relative estimates. KEYWORDS: Hydrology & Hydraulics fires, sedimentation, watersheds, watershed sediment California, South Central Region, South Coast Region, San Diego Region Geology and Recent Sediment Distribution from Santa Barbara to Rincon Point, California AUTHOR(S): Hoyt, D. R. M. S. Thesis, University of Southern California, Los Angeles, SOURCE: California DATE: 01/01/76 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geology, sedimentation, littoral sediment California, South Central Region An Investigation of Wave Sheltering by Islands AUTHOR(S): Hsiao, S. V.; Vesecky, J. F.; Shemdin, O. H. SOURCE: International Conference on Coastal Engineering, 1980, ASCE, N. Υ., Chapter 52, pp. 840-849 DATE: 01/01/80 ABSTRACT: The West Coast Experiment, a meso-scale oceanographic experiment, was conducted from February to April, 1977 off the coast of Southern California. The wave data measured by an air-borne synthetic aperture radar (SAR) and а shore-based high frequency (HF) radar on March 25, 1977 are used to study the sheltering effect of islands on waves propagating towards shore. The comparisons between wave directional spectra offshore in the vicinity of islands and nearshore show that islands play a significant role in determining the near shore wave climate. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, South Central Region, Critical Fire Weather Patterns and Their Frequency and Levels of Danger AUTHOR(S): Hull, M. K.; O'dell, C. A.; Schroeder, M. J. SOURCE: U. S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Exp. Station, Berkeley, California, 40+ pp. DATE: 01/01/66

ABSTRACT: Evaluates weather patterns over 1951-1962 period to establish fire conditions. Presents four weather types related to critical fire weather in California: upper air patterns; subtropical high aloft, meridional ridge southwest flow, Pacific post-frontal high, and Great Basin high. KEYWORDS: Oceanography & Meteorology fires California, South Central Region, South Coast Region, San Diego Region Coastline Study of Huntington Beach AUTHOR(S): Huntington Beach Dept. of Harbors and Beaches SOURCE: Vol. 2, Huntington Beach Department of Harbors and Beaches, California DATE: 01/01/73 ABSTRACT: not reviewed KEYWORDS: Coastal Processes shoreline changes, coastal erosion problems California, South Coast Region, Subregion IX, San Pedro Cell A Universal Form of Shoreline Run-Up Spectra AUTHOR(S): Huntley, D. A.; Guza, R. T.; Bowen, A. J. SOURCE: Journal of Geophysical Research, Vol. 82, No. 18, pp. 2577-2581 DATE: 06/20/77 ABSTRACT: Time series of shoreline run-up on two natural beaches have been measured by using a time-lapse camera. The result is discussed in relation to previous laboratory experiments and theories, based on monochromatic waves. which suggest the existence of a limiting amplitude for standing waves formed by reflection at the shoreline. Assumptions cannot be tested directly, but the observed distribution functions for run-up elevation suggest that it may need to be modified. Departures from the universal spectrum at higher and lower frequencies are briefly discussed. KEYWORDS: Coastal Processes wave transformation California, San Diego Region, Subregion X, Oceanside Cell Field Observations of Surf Beat, 1. Progressive Edge Waves AUTHOR(S): Huntley, D. A.; Guza, R. T.; Thornton, E. B. SOURCE: Journal of Geophysical Research, Vol. 86, No. C7, pp. 6451-6466 DATE: 07/20/81 ABSTRACT: Nineteen biaxial electromagnetic current meters have been used to determine the longshore and on/offshore structure of currents at surf beat periods (1-4 min). The sensors formed two linear arrays, longshore array within the surf zone and an on/offshore array stretching from the shoreline to well beyond the breaker line. Analysis of the longshore current components yields a

clear picture of progressive low-mode edge waves, with predictions. On/offshore currents present a rather different picture which, while not inconsistent with the longshore currents, suggests that other sources of energy are also important to the on/offshore currents. These include standing edge waves probably formed by reflections at nearby Scripps Canyon, and motions which are nonresonantly forced by incoming KEYWORDS: Coastal Processes longshore current, nearshore currents, coastal erosion, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Tropical Cyclones of the Eastern North Pacific Ocean AUTHOR(S): Hurd, E. H. Monthly Weather Review, Vol. 57, No. 2, pp. 43-49 SOURCE: DATE: 02/01/29 ABSTRACT: Points out that not all tropical cyclones occur in the western boundaries of oceans. Goes through historical evidence from 1685 to 1929; most details are for 1910-1928 period. Includes storm tracks, and descriptions of various tropical storms. Gives statistical data as to size, intensity and monthly trends. KEYWORDS: Oceanography & Meteorology storms/floods California, South Central Region, South Coast Region, San Diego Region Hydraulic Method Used for Moving Sand at Hyperion Beach Erosion Project, E.I Segundo, California AUTHOR(S): Hurd, J. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, CERC Misc. Paper 4-74 DATE: 06/01/74 ABSTRACT: A project near Los Angeles in 1947. The hydraulic method of moving sand was used to widen Hyperion Beach to counter erosion. About 14 million cubic yards were moved. The report describes the process in detail, including aerial photos. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal erosion California, South Coast Region, Subregion VIII, Santa Monica Cell Rubble-Mound Structures as Artificial Reefs AUTHOR(S): Hurme, A. K. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Reprint 79-4

DATE: 08/01/79 ABSTRACT: U. S. Army Corps of Engineers rubble-mounds can be colonized by diverse reef-dwellers, are an aid to navigation, and pose no hazard to commercial fishing. Example: Rincon Island, California. KEYWORDS: Coastal Processes coastal structures California, South Central Region, Subregion VII, Santa Barbara Cell Santa Margarita River Investigation AUTHOR(S): Illingworth, L. R. SOURCE: Bulletin 57, Department of Public Works, Division of Water Resources. California, 2 Vols., 272+ pp. DATE: 06/01/56 ABSTRACT: Presents general investigation and includes precipitation data from the 19th century to 1955; runoff data, peak discharges, and flood history. Includes records of stream discharge not pre- viously published. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, watersheds California, San Diego Region, Subregion X, Oceanside Cell Tracing Beach Sand Movement by Means of Flourescent Dyed Sand AUTHOR(S): Ingle, J. C. SOURCE: Shore & Beach, Reprint, 6 pp. DATE: 10/01/62 ABSTRACT: Tracing the movement of sand under a wide range of foreshore conditions at five semi-permanent test sites along the Southern California coastline: Goleta Point, Trancas, Santa Monica, Huntington Beach, and La Jolla. Each beach represents a different geomorphic setting, and a multitude of differing beach characteristics such as sand size, beach slope, and wave incidence. Field work initiated February 1961, through July 1962. KEYWORDS: Coastal Processes beaches, longshore transport, wave transformation, grain size, offshore/onshore transport, wave climate California, South Central Region, South Coast Region, San Diego Region, Subregion VII, The Movement of Beach Sand, An Analysis Using Fluorescent Grains AUTHOR(S): Ingle, J. C. SOURCE: Developments in Sedimentology 5, Elsevier Publishing Co., N. Y., 221 pp. DATE: 01/01/65 ABSTRACT: In order to trace the movement of sand under a wide range of foreshore-inshore conditions, five permanent test sites were chosen along the Southern California coast. The beaches were selected on the basis of accessibility and character of the foreshore-inshore zone: from north to south, Goleta Point, Trancas, Santa Monica, Huntington, and La Jolla. Each beach

represents a different geomorphic setting as well as an array of differing foreshore characteristics including sand size, beach slope, wave incidence, and current activity. KEYWORDS: Geomorphology, Coastal Processes wind transport, littoral sediment, nearshore currents, offshore/onshore transport, California, South Central Region, South Coast Region, San Diego Region Observations of Nearshore Sand Transport by Waves at Scripps Institution of Oceanography, La Jolla AUTHOR(S): Inman, D. L. Bulletin Geological Society of America, Vol. 59, p. 1374 SOURCE: DATE: 01/01/48 ABSTRACT: Abstract. Discusses observations made with a sediment trap designed to catch sand in four cardinal directions at elevations varying from 3 inches to 4 feet above the bottom. Attempts to correlate with present theories of sand movement. KEYWORDS: Coastal Processes coastal structures, longshore transport, sand entrapment, offshore/onshore transport, sedimentation, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Report on Beach Study in the Vicinity of Mugu Lagoon, California AUTHOR(S): Inman, D. L. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo No. 14, 47 pp. DATE: 03/01/50 ABSTRACT: Investigation to determine the relative stability of beach and sand spits in the vicinity of Point Mugu and to make recommend- ations for their preservation. Beaches and sand spits that border Mugu Lagoon are not stable. Spring tides, high waves, and direction of littoral transport affect the stability of the spits that border the Lagoon. KEYWORDS: Coastal Processes, Hydrology & Hydraulics beaches, longshore transport, sand bars, littoral sediment, offshore/onshore transport, wave climate California, South Central Region, Subregion VII, S. Santa Barbara Reach Report on Beach Study in the Vicinity of the Mugu Lagoon, California AUTHOR(S): Inman, D. L. SOURCE: Tech. Memo 14, U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., 43 pp. DATE: 03/01/50 ABSTRACT: Provides wind and wave roses, meteorolgical data and wave data at

Pt. Mugu, California. Includes beach profiles. KEYWORDS: Oceanography & Meteorology, Coastal Processes wind, wave climate, beach profiles California, South Central Region, Subregion VII, Santa Barbara Cell, S. Santa Barbara Reach Submarine Topography and Sedimentation in the Vicinity of Mugu Submarine Canyon, California AUTHOR(S): Inman, D. L. SOURCE: U. S. Army Corps of Engineer, Beach Erosion Board, Washington, D. C., BEB Tech. Memo. No. 19, 45 pp. DATE: 07/01/50 ABSTRACT: Bathymetry of the adjacent shelf and the submarine canyon heads adjacent to the beach and lagoon is described. Mugu Submarine Canyon has two branches at its head, each having an isolated ridge protruding from the floor parallel to the canyon axis. The relation of sediment type and bottom topography is investigated. KEYWORDS: Coastal Processes submarine canyons, littoral sediment, longshore current, offshore/onshore transport, sedimentation California, South Central Region, Subregion VII, S. Santa Barbara Reach Currents in the Surf Zone AUTHOR(S): Inman, D. L.; Quinn, W. H. SIO Reference 52-10, Submarine Geology Report No. 23, Scripps SOURCE: Institution of Oceanography, La Jolla, California, 10 pp. DATE: 03/01/52 ABSTRACT: A series of longshore current measurements was made in 1949 and 1950 along two straight beaches in the San Diego area to study, quantitatively, the variability of current velocities in the surf zone, and to test the method of prediction of longshore currents from the characteristics of the waves producing them. This paper is limited to a discussion of currents inside the breaker zone. Includes data. KEYWORDS: Coastal Processes longshore current, nearshore currents, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell, Mission Bay Cell Areal and Seasonal Variations in Beach and Nearshore Sediments at La Jolla. California AUTHOR(S): Inman, D. L. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 39, 134 pp. DATE: 03/01/53

ABSTRACT: The nature of seasonal distribution of certain physical properties of sediments on the beach and shallow shelf area between two submarine canyon heads is studied. Series of bottom samples were obtained periodically. Topographic surveys showing the changes in sand level were made concurrently with sediment sampling operations. Emphasis in the laboratory analysis of the sediments was on distribution of heavy particle size, but other properties were also measured. Movement of beach and bottom materials and areal distribution of their physical properties are discussed. KEYWORDS: Coastal Processes beach profiles, grain size, littoral sediment, longshore transport, offshore/onshore transport, submarine canyons California, San Diego Region, Subregion X, Oceanside Cell Beach and Nearshore Processes Along the Southern California Coast AUTHOR(S): Inman, D. L. SOURCE: Chapter 5, Geomorphology, Geology of So. Calif., Bull. 170, Divn. of Mines, Sacramento, Calif., pp. 29-34; and SIO Ref. 53-35 1953, Scripps Institution of Ocean., La Jolla, California DATE: 01/01/54 ABSTRACT: Summary of erosional and depositional nearshore processes of Southern California shoreline. Related factors are discussed. Includes data. KEYWORDS: Coastal Processes beaches, beach profiles, coastal erosion, littoral sediment, longshore transport, wave transformation California, South Central Region, South Coast Region, San Diego Region Particle Size Distribution in Nearshore Sediments AUTHOR(S): Inman, D. L.; Chamberlain, T. K. SOURCE: Society of Economic Paleontologists and Mineralogists, Divn. of Amer. Assoc. of Petroleum Geologists, Special Publication 3, pp. 106-127 DATE: 01/01/55 The patterns of the areal variation in the distribution of ABSTRACT: sediments from several beach and nearshore environments along the California and Gulf of Mexico coasts have been studied. A detailed investigation was conducted on a closely-spaced grid in one of the areas, and sufficient areal and seasonal samples were obtained so that the characteristics of the distribution of particle size with time and distance could be determined. Includes La Jolla area data. KEYWORDS: Coastal Processes littoral sediment, longshore transport, grain size, petrology, sedimentation California, South Central Region, South Coast Region, San Diego Region, Subregion X

Orbital Velocity Associated With Wave Action Near the Breaker Zone AUTHOR(S): Inman, D. L.; Nasu, N. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 79, pp. 333-414 DATE: 03/01/56 Orbital velocity associated with ocean surface waves in ABSTRACT: shallow water was measured for various wave conditions at La Jolla, California. Measurements were made near the bottom and just seaward of the breaker zone in water depths ranging from about 5 to 15 feet and for wave heights as great as 7-1/2 feet. Observed maximum horizontal velocities compare favorably with those predicted from solitary wave theory when the ratio of wave height to water depth is greater than about 0.4, the agreement with theory being somewhat better for longer period waves. KEYWORDS: Coastal Processes wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Changes in Sand Level on the Beach and Shelf at La Jolla, California AUTHOR(S): Inman, D. L.; Rusnak, G. S. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 82, pp. 106-127 DATE: 07/01/56 ABSTRACT: A technique is developed to establish a reference level on the bottom from which small net changes in sand level can be measured. Bottom changes were measured periodically for three years at stations from near the surf zone to 70-foot depths. Sand level estimates were made for monthly and seasonal periods and correlated with depth. KEYWORDS: Coastal Processes littoral sediment, longshore transport, shoreline changes, wave transformation, beach profiles, offshore/onshore transport California, San Diego Region, Subregion X, Research at the Scripps Institution of Oceanography AUTHOR(S): Inman, D. L. SOURCE: Proceedings, Conference on Sediment Problems in California, Nov., 1956; H. A. Einstein, J. W. Johnson, Eds.; Comm. on Res. in Water Res., Univ. of Calif., Berkeley, pp. 10-13 and 122-132 DATE: 01/01/57 ABSTRACT: Addresses two broad and general aspects of the sedimentation problem: the total budget of sand on the beach, and the mechanics of sand

transportation along the shore and loss into submarine canyons. KEYWORDS: Coastal Processes longshore transport, offshore/onshore transport, sedimentation, coastal erosion, submarine canyons California, Oregon, Mexico Wave-Generated Ripples in Nearshore Sands AUTHOR(S): Inman, D. L. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 100, 42 pp. DATE: 10/01/57 ABSTRACT: A study of the occurrence of sand ripples generated by wave action in the nearshore area has been made based on observations from several locations by swimmers equipped with SCUBA gear. The wave length, crest length, height and symmetry of the ripples were measured and compared with size of the sand and with orbital displacement and velocity of the wave motion generating the ripples. Includes data. KEYWORDS: Coastal Processes beaches, littoral sediment, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Experiments with Radio-Active Sand as a Tracer of Beach Sand Movement AUTHOR(S): Inman, D. L.; Chamberlain, T. K. SOURCE: Second United Nations Conference on the Peaceful Uses of Atomic Energy, Washington, D.C., pp. 527-540 DATE: 06/01/58 ABSTRACT: Report on procedure used in this radio-active tracer experiment. Includes some data. KEYWORDS: Coastal Processes beaches, beach profiles, littoral sediment, longshore transport, offshore/onshore transport California, San Diego Region, Subregion X, Oceanside Cell Tracing Beach Sand Movement with Irradiated Quartz AUTHOR(S): Inman, D. L.; Chamberlain, T. K. SOURCE: Journal of Geophysical Research, Vol. 64, No. 1, pp. 41-47 DATE: 01/01/59 ABSTRACT: Mechanics of transportation of sand under the influence of wave action was studied using artificially induced radioactivity. The movement of quartz is traced. Field experiments showed that the dispersal of sand by wave action was more rapid than expected, and that movement of this small amount of sand could be followed for about 7 to 24 hours. KEYWORDS: Coastal Processes longshore transport, beaches, littoral sediment, offshore/onshore transport, wave transformation

California, San Diego Region, Subregion X, Oceanside Cell Shore Processes AUTHOR(S): Inman, D. L. SOURCE: Encyclopedia of Science and Technology, McGraw-Hill Book Co., Inc., pp. 299-306 DATE: 01/01/60 ABSTRACT: General discussion of shore processes. Photos of longshore currents at Oceanside, accretion at Point Mugu. Addresses wave periods, depths; longshore current velocity, sand movement. KEYWORDS: Coastal Processes geomorphic processes, longshore current, shoreline changes, longshore transport, offshore/onshore transport, wave climate California, South Central Region, Subregion VII, S. Santa Barbara Reach Littoral Sand Budget Along the Southern California Coast AUTHOR(S): Inman, D. L.; Chamberlain, T. K. SOURCE: Report of the 21st International Geological Congress, Volume of Abstracts, Copenhagen, Denmark, pp. 245-246 DATE: 01/01/60 ABSTRACT: Consideration of the littoral processes of sand transport together with the bathymetry and sedimentation in the adjacent submarine basins indicate several discrete sedimentation cells. A detailed study was made of the San Pedro Cell and Newport Submarine Canyon. The abstract is the publication. KEYWORDS: Coastal Processes longshore transport, offshore/onshore transport, littoral sediment, river sediment discharge, submarine canyons California, South Coast Region, Subregion VIII, San Pedro Cell Ocean Waves and Associated Currents AUTHOR(S): Inman, D. L. Chapter III, Submarine Geology, Second Edition, F. P. Shepard, SOURCE: Ed., Harper and Row, N. Y., pp. 49-80 DATE: 01/01/63 ABSTRACT: Effects of waves and wave motion in a general discussion. Scripps Institution of Oceanography pier example of circulation pattern. KEYWORDS: Coastal Processes longshore current, nearshore currents, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Sediments: Physical Properties and Mechanics of Sedimentation AUTHOR(S): Inman, D. L. SOURCE: Chapter IV, Submarine Geology, Second Edition, F. P. Shepard, Ed., Harper and Row, N. Y., pp. 101-151 DATE: 01/01/63 ABSTRACT: Physical properties of sediments and the concepts of sedimentary

mechanics are presented and interpreted, realizing that classifications are to some extent arbitrary, and classification and analysis procedures will not necessarily yield measures relevant to sedimentary dynamics. KEYWORDS: Coastal Processes, Geomorphology geomorphic processes, grain size, littoral sediment, petrology, sedimentation California Beach and Nearshore Processes, Part II - Littoral Processes AUTHOR(S): Inman, D. L.; Bagnold, R. A. SOURCE: In: The Sea, Observations on Progress in the Study of the Seas, Vol. III - The Earth Beneath the Sea, M. H. Hill, gen'l Ed.; Interscience Publ., Div. John Wiley & Sons, N. Y., pp. 529-1553 DATE: 01/01/63 ABSTRACT: An outline of the degree to which natural processes control the form assumed by the littoral sea bed, and which have been successfully reproduced in models. Profile of beach at La Jolla. KEYWORDS: Coastal Processes longshore transport, sedimentation, beaches, beach profiles, littoral sediment, offshore/onshore transport California, San Diego Region, Subregion X, Oceanside Cell Littoral Processes and the Development of Shorelines AUTHOR(S): Inman, D. L.; Frautschy, J. D. SOURCE: Coastal Engineering, Santa Barbara Specialty Conference; ASCE, N. Y., pp. 511-536 DATE: 10/01/65 Basic principles bearing on the nature of beaches and ABSTRACT: processes that act to modify them are considered in the light of present coastal development demands. Discusses equilibrium energy pro- file of fine sand beach at La Jolla, littoral cells, groins at Santa Monica, and source and budget of nearshore sediment. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal erosion, littoral sediment, longshore transport, shoreline changes, coastal structures California, South Coast Region, San Diego Region, Subregion IX, Subregion Х, Santa Monica Cell, Oceanside Cell Longshore Transport of Sand AUTHOR(S): Inman, D. L.; Komar, P. D.; Bowen, A. J. SOURCE: Proceedings of 11th Conference on Coastal Engineering, London, England, ASCE, N. Y.; Vol. 1, pp. 298-300 DATE: 01/01/68

ABSTRACT: Simultaneous field measurements of the energy flux of breaking waves and the resulting longshore transport of sand in the surf zone have been made along three beaches for a variety of wave conditions. The measurements indicate that the longshore transport rate of sand is directly proportional to the longshore component of wave power. This is a preliminary report of a continuing study at El Moreno Beach, Gulf of California; Silver Strand Beach, Coronado and Scripps Beach, La Jolla, California. KEYWORDS: Coastal Processes longshore transport, wave transformation, wave climate, littoral sediment, longshore current California, Mexico, San Diego Region, Dispersion of Water and Sediment in the Surf Zone, First Annual Report AUTHOR(S): Inman, D. L.; Tait, R. J.; Komar, P. D.; Nordstrom, C. E. SOURCE: SIO Reference Series 68-4, Proposal UCSD 1753 with State of Calif. Water Resources Control Board, Scripps Institution of Oceanography, La Jolla, California, 27 pp. DATE: 01/15/68 ABSTRACT: The first annual report on a two-year study of the dispersion of fluids and sediments in the nearshore zone. Discusses the results of field and laboratory measurements obtained. Synoptic field studies of sand transport and wave energy flux at Silver Strand Beach and State Park, and Scripps Beach in the presence of 6-foot breaking waves, and on the barrier beaches in the Gulf of California under conditions of 1-to-3-foot breakers. In addition a three-week field study was made of the dispersion of mud pumped into the surf zone at Silver Strand Beach, and the KEYWORDS: Coastal Processes beaches, longshore transport, wave transformation, beach nourishment/dredging, littoral sediment, offshore/onshore transport California, Mexico, San Diego Region, Subregion X, Silver Strand Cell Dispersion of Water and Sediment in the Surf Zone, Final Report AUTHOR(S): Inman, D. L.; Tait, R. J.; Komar, P. D.; Nordstrom, C. E. SOURCE: SIO Reference 69-10, Scripps Institution of Oceanography, La Jolla, California, 119 pp. DATE: 12/31/68 ABSTRACT: Relates the dispersion of water and sediment in the surf zone to environmental parameters that will permit the movement of possible beach

pollutants to be estimated from a knowledge of beach geometry and the local wave regime. KEYWORDS: Coastal Processes beaches, longshore transport, nearshore currents, wave climate, wave transformation, offshore/onshore transport California, San Diego Region, Subregion X, Silver Strand Cell Mixing in the Surf Zone AUTHOR(S): Inman, D. L.; Tait, R. J.; Nordstrom, C. E. SOURCE: Journal of Geophysical Research, Vol. 76, No. 15, pp. 3493-3514 DATE: 05/01/71 ABSTRACT: Two important mixing mechanisms are operative within the surf zone. each having distinctive length and time scale determined by the intensity of the waves and the dimensions of the surf zone. The first is associated with the breaking wave and its bore, the second is advective and is associated with the long- shore and rip currents in the nearshore circulation cell. These two processes are examined. Includes field data on El Moreno, Scripps, and Silver Strand Beaches. KEYWORDS: Coastal Processes longshore current, nearshore currents, wave climate, wave transformation California, Mexico, San Diego Region, Subregion X, Oceanside Cell, Silver Strand Cell Geologic Setting of Torrey Pines State Reserve AUTHOR(S): Inman, D. L.; Nordstrom, C. E. SOURCE: Torrey Pines State Reserve, C. L. Hubbs and T. W. Whitaker, Eds., Second Edition, Torrey Pines Assoc., La Jolla, California, pp. 72-81 DATE: 04/01/72 Geologic setting and history, including figures showing ABSTRACT: formations. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes California, San Diego Region, Subregion X, Oceanside Cell Sand Management Research and Development at the Scripps Institution of Oceanography AUTHOR(S): Inman, D. L.; Harris, R. W. SOURCE: Unpublished Paper, 3 pp. DATE: 07/01/73 ABSTRACT: Report of first phase of study to identify improved procedures for sand management, other than by conventional dredging methods. Sand crater and jet pump systems are discussed. Field tests to be conducted offshore near Scripps Institution pier. KEYWORDS: Coastal Processes institutions/planning/mgmt., littoral sediment, longshore transport, beach

nourishment/dredging, sand entrapment, sedimentation California, San Diego Region, Subregion X, Oceanside Cell The Coastal Challenge AUTHOR(S): Inman, D. L.; Brush, B. M. SOURCE: Science, Vol. 181, pp. 20-32 DATE: 07/06/73 ABSTRACT: General coastal processes description leading to observations regarding preservation and efficient future planning. KEYWORDS: Coastal Processes geomorphic processes, shoreline changes, institutions/planning/mgmt., coastal erosion problems California, South Central Region, South Coast Region, San Diego Region Water Motion and Water-Sediment Interaction AUTHOR(S): Inman, D. L.; et al. SOURCE: Offshore Nuclear Power Siting Workshop, sponsored by the Atomic Energy Commission, Rockville, Maryland, 15 pp. DATE: 10/01/73 ABSTRACT: Discussion of major recommendation for research of potential marine environmental problems connected with the construction and operation of nuclear power plants located in the nearshore coastal regions. Three workshop viewpoints: air-sea inter- actions; water motions and water-sediment interactions; and marine biology. Evaluations were made by each group. KEYWORDS: Coastal Processes environmental constraints, institutions/planning/mgmt., longshore transport, sand entrapment, wave transformation, littoral sediment California Currents in Submarine Canyons: An Air-Sea-Land Interaction AUTHOR(S): Inman, D. L.; Nordstrom, C. E.; Flick, R. E. SOURCE: Annual Review of Fluid Mechanics, Vol. 8, pp. 275-310 DATE: 01/01/76 ABSTRACT: Submarine canyons serve as active conduits joining the shallow waters of the shelf to the deeper waters offshore. Canyon currents are generated by wind, wave, and tidal forces. Simultaneous measurement of currents and pressure in Scripps Submarine Canyon, and of winds, waves, and pressure over the adjacent shelf have been made for several years, with the strongest down-canyon current measured at a depth of 44 meters, recorded during the passage of a storm front on November 24, 1968. Measurements in other canyons, although less comprehen- sive, suggest that this multiple-interaction hypothesis may have general application to submarine canyons. KEYWORDS: Coastal Processes submarine canyons, coastal currents, California, San Diego Region, Subregion X, Oceanside Cell Man's Impact on the California Coastal Zone

AUTHOR(S): Inman, D. L. SOURCE: Summary Report for the State of California Dept. of Navigation and Ocean Development, Scripps Institution of Oceanography, La Jolla, California, 150 pp. DATE: 11/01/76 ABSTRACT: Describes physical processes that occur at the shore due to wave action at specific sites. Summarizes some of the more fundamental information necessary to understand nearshore processes, outlines some principles of coastal zone planning, and suggests corrections for specific coastal problems along the California coast. KEYWORDS: Coastal Processes coastal erosion problems, littoral sediment, shoreline changes, wave transformation, longshore transport, offshore/onshore transport California, South Central Region, Status of Surf Zone Sediment Transport Relations AUTHOR(S): Inman, D. L. Proceedings of Workshop on Coastal Sediment Transport with SOURCE: Emphasis on the National Sediment Transport Study, Sea Grant College Program DEL-SG-15 - 78. Univ. of Delaware, pp. 9-20 DATE: 01/01/78 ABSTRACT: Predicting longshore transport relations, including equations. Silver Strand and El Moreno Beaches array. Importance of suspended load transport in surf zone is postulated. KEYWORDS: Coastal Processes littoral sediment, longshore transport, wave transformation, longshore current, offshore/onshore transport California, Mexico, San Diego Region, Subregion X, Silver Strand Cell The Impact of Coastal Structures on Shorelines AUTHOR(S): Inman, D. L. SOURCE: Coastal Zone '78, Proceedings of the Symposium on Aspects of Coastal Zone Management, San Francisco, California; ASCE, N. Y., pp. 2265-2272 DATE: 03/01/78 ABSTRACT: General historic data and an example on Silver Strand Beach. Includes data. KEYWORDS: Coastal Processes coastal structures, shoreline changes, coastal erosion, coastal erosion problems, sand entrapment California, San Diego Region, Subregion X, Silver Strand Cell Field Measurements of Sand Motion in the Surf Zone AUTHOR(S): Inman, D. L.; et al. SOURCE: Proceedings of the 17th International Coastal Engineering Conference, Sydney, Australia, March 23-28, 1980; ASCE, N. Y., pp. 1215-1234

DATE: 03/01/80

ABSTRACT: Forcing functions and sediment response were measured during two comprehensive surf zone experiments. The experiments included simultaneous measurements of waves and currents, and the movement of sediment as bed and suspended load. The longshore transport of suspended load was found to be 10% to 20% of the tracer-measured load. Results from tracer measurements of the longshore transport of bed load indicate that previous measurements may have misestimated the effective "tracer layer thickness." KEYWORDS: Coastal Processes littoral sediment, longshore transport, California, San Diego Region, Subregion X, Oceanside Cell Southern California Coastal Field Trip, May 21, 1980 AUTHOR(S): Inman, D. L.; Shaw, M. Coastal Sciences Program, UNR Code 462, unpublished paper, 23 SOURCE: pp. DATE: 05/21/80 ABSTRACT: Agenda and pre-field trip introduction to study area. Includes data. KEYWORDS: Coastal Processes geology, geomorphic processes, institutions/planning/mgmt., shoreline changes California, South Central Region, South Coast Region, San Diego Region Fluid-Sediment Interactions on Beaches and Shelves AUTHOR(S): Inman, D. L.; Guza, R. T.; Winant, C. D.; Flick, R. E. SOURCE: SIO Reference Series 81-27, Scripps Institution of Oceanography, La Jolla, California, 86 pp. DATE: 09/11/81 Progress report of study for 1980-1981. The research seeks ABSTRACT: to predict shelf and beach forms and their changes based on a knowledge of the local bathymetry and the driving forces due to wind, waves, and currents, and their complicated interactions with nearshore sediments. The work falls into three distinct but interdependent areas of research: wave and current dynamics; fluid/sediment interactions; coastal zone remote sensing. KEYWORDS: Coastal Processes longshore current, wave climate, wave transformation, beach profiles, longshore transport, California, San Diego Region, Subregion X, Oceanside Cell The Origin of Swash Cusps on Beaches AUTHOR(S): Inman, D. L.; Guza, R. T. SOURCE: Marine Geology, Elsevier Scientific Publishing Co., Amsterdam, Netherlands, Vol. 49, pp. 133-148

DATE: 01/01/82 ABSTRACT: Genetically, there are two types of beach cusps; those formed in the surf zone by the nearshore circulation system, and those formed on the beach face by the swash and backwash. The latter are here called 'swash' cusps, and a simple model relating the physical dimensions of swash cusps to the properties of the incident wave field and the mean beach slope is developed. As in some previous models, the cusp wavelength is controlled by the longshore wavelength of edge waves, but the edge waves are now required only to provide small periodic perturbations on an originally uniform beach. The present model implies that edge waves, although necessary for initiating the initial bedform perturbation, need not persist for the development of mature KEYWORDS: Coastal Processes beaches, beach profiles, littoral sediment, offshore/onshore transport, wave transformation California, South Coast Region, Subregion IX, San Pedro Cell Oceanographic Report for Oceanside Beach Facilities AUTHOR(S): Inman, D. L.; Jenkins, S. A. SOURCE: City of Oceanside, California DATE: 01/01/83 ABSTRACT: not reviewed KEYWORDS: Coastal Processes beaches, beach nourishment/dredging, coastal structures, shoreline use California, San Diego Region, Subregion X, Oceanside Cell Application of Coastal Dynamics to the Reconstruction of Paleocoastlines in the Vicinity of La Jolla, California AUTHOR(S): Inman, D. L. In: Quaternary Coastlines and Marine Archeology, P. M. Masters SOURCE: and N. C. Flemming, Eds.; Academic Press, London, England, pp. 1-49 DATE: 01/01/83 ABSTRACT: Paleocoastlines and Holocene environments coinciding with human habitation are reconstructed for the coastal area near La Jolla, California. The reconstruction considers worldwide geologic phenomena of importance to this coastal area, but is based primarily on the application of principles of coastal dynamics to the known geology of the area. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, sea level change California, San Diego Region, Subregion X, Oceanside Cell Oceanographic Report for Community Facility District for Beach Facilities for the City of Oceanside

AUTHOR(S): Inman, D. L. SOURCE: Ronald M. Noble, Coastal Engineer Consultant, Malibu, California, 16 pp. DATE: 07/21/83 ABSTRACT: Abstract of Oceanside Beach Study, including preliminary cost estimates. Includes some data. KEYWORDS: Coastal Processes longshore transport, shoreline changes California, San Diego Region, Subregion X, Oceanside Cell Nearshore Processes Along the Silver Strand Littoral Cell AUTHOR(S): Intersea Research Corp. SOURCE: Intersea Research Corporation, La Jolla, California, 100+ pp. DATE: 08/15/74 ABSTRACT: Examines the problem of beach erosion on a 14-mile segment of the California coastline from the International Boundary north to the entrance of San Diego Bay. Study included sources, littoral transport paths, transport rates, and depositional sinks of beach sand in terms of the physical processes active in the nearshore environment. KEYWORDS: Coastal Processes coastal erosion problems, longshore transport, beaches, coastal structures, littoral sediment, wave climate California, San Diego Region, Subregion X, Silver Strand Cell, S. Silver Strand Reach Flourescent Sand Tracer Study, Orange County - Final Report AUTHOR(S): Interstate Electronics Corp. SOURCE: Interstate Electronics Corporation, Anaheim, California, 91 pp. DATE: 01/01/66 ABSTRACT: not reviewed KEYWORDS: Coastal Processes longshore transport, littoral sediment California, South Coast Region, Subregion IX Designs for Rubble-Round Breakwater Repair, Morro Bay Harbor, California; Hydraulic Model Investigation AUTHOR(S): Jackson, R. A. SOURCE: WES Tech. Report 2-567, U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi, 56 pp. DATE: 05/01/61 ABSTRACT: The north breakwater at Morro Bay was severely damaged by wave action in 1956 through 1958, and a reconstruction project is proposed which involves rebuilding the head of this breakwater and strengthening the damaged portion of its trunk. KEYWORDS: Coastal Processes

coastal structures, environmental constraints California, South Central Region, Subregion VII, Oceanside Cell A Study of Longshore Sand Transport at Mission Beach AUTHOR(S): Jansen, L. SOURCE: San Diego State University, San Diego, California, 45 pp. DATE: 01/01/76 ABSTRACT: not reviewed KEYWORDS: Coastal Processes longshore transport California, San Diego Region, Subregion X, Mission Bay Cell Tidal Prism - Inlet Area Relationship AUTHOR(S): Jarrett, J. T. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC GITI 3, 59 pp. DATE: 02/01/76 ABSTRACT: The tidal prism-inlet area relationships for inlets on sandy coasts established by M. P. O'Brien were reanalyzed using his data and data published by other investigators. In addition tidal prism and inlet crosssectional area data developed in the Inlet Classification Study were also used. These data result in a total of 162 data points for 108 inlets, 25 of which are located on the Pacific Coast of the United States. The data are grouped into three main categories, namely 1) all inlets, 2) unjettied and single-jettied inlets, and 3) inlets with two jetties. KEYWORDS: Coastal Processes coastal structures, tidal inlets, tides California, Oregon, Mexico Wave Refraction Near San Pedro Bay, California AUTHOR(S): Jen, Y. SOURCE: Journal of Waterways and Harbors Division, ASCE, N. Y. Vol. 95, No. WW3, pp. 379-393; and Discussion, Vol. 97, No. WW1, February 1971, pp. 209-211 DATE: 01/01/69 ABSTRACT: A numerical procedure for calculation and plotting of wave refraction diagrams was applied to the San Pedro Bay area. Waves from all major directions with periods of 15, 30 and 60 seconds and longer were considered in the computation. Includes diagrams of data and comparisons with previous available graphical analysis. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Coast Region, Subregion IX, San Pedro Cell Opening and Maintaining Tidal Lagoons and Estuaries

AUTHOR(S): Jenkins, S. A.; Inman, D. L.; Bailard, J.

SOURCE: Proceedings of the 17th International Coastal Engineering Conference, March 23-25, 1980, Sydney, Australia, Chapter 92, ASCE, N. Y., pp. 1528-1547 DATE: 01/01/80 ABSTRACT: This paper reports on five separate prototype scale field experiments that test alternative measures to dredging. Two of these experiments evaluate techniques of resuspension and exclusion for reducing fine sediment accumulations in quiet water, cul-de-sac berths, where the observed shoaling rates are greatest and dredging most difficult. These berths are essentially sediment settling basins where currents are insufficient to resuspend new deposits. Two experiments involved by-passing sand around the inlet of Agua Hedionda Lagoon, California using fluidized trenches funnelling into a crater sink. The final experiment used open trench KEYWORDS: Coastal Processes estuarine sediment storage, sand entrapment, sedimentation, tidal inlets California, San Diego Region, Subregion X, Oceanside Cell The Evaluation of Sediment Management Procedures, Phase IV-VI, Final Report, 1978-1980 AUTHOR(S): Jenkins, S. A.; Inman, D. L.; Van Dorn, W. G. SOURCE: SIO Reference Series 81-22, Scripps Institution of Oceanography, La Jolla, California, 204 pp. DATE: 06/01/81 Investigation of sediment problems at Navy port facilities, ABSTRACT: and possible alternatives to standard maintenance dredging. KEYWORDS: Coastal Processes littoral sediment, sand entrapment, sedimentation, estuarine sediment storage, river sediment discharge California, Central Coast Region, South Central Region, South Coast Region, San Diego Region Santa Maria Sheet Geologic Map of California AUTHOR(S): Jennings, C. W. SOURCE: California Division of Mines and Geology, Sacramento, California DATE: 01/01/59 Geologic map, scale 1:250,000 with index of maps. One map ABSTRACT: sheet and four page explanation. KEYWORDS: Geomorphology geology, maps California, South Central Region, Subregion VII, Santa Monica Cell San Luis Obispo Sheet, Geologic Map of California AUTHOR(S): Jennings, C. W.

SOURCE: California Division of Mines and Geology, Sacramento, California DATE: 01/01/59 ABSTRACT: Geologic map, scale 1:250,000 with index of maps. KEYWORDS: Geomorphology geology, maps California, South Central Region, Subregion VI, Morro Bay Cell, Santa Maria River Cell Los Angeles Sheet, Geologic Map of California AUTHOR(S): Jennings, C. W.; Strand, R. G. SOURCE: California Division of Mines and Geology, Sacramento, California DATE: 01/01/69 ABSTRACT: Geologic map, scale 1:250,000, with four page explanation. KEYWORDS: Geomorphology geology, maps California, South Coast Region, Subregion VIII, Santa Monica Cell Long Beach Sheet, Geologic Map of California AUTHOR(S): Jennings, O. P. SOURCE: California Division of Mines and Geology, Sacramento, California DATE: 01/01/62 ABSTRACT: Geologic map, scale 1:250,000, with four page explanation. KEYWORDS: Geomorphology geology, maps California, South Coast Region, Subregion IX, San Pedro Cell Ecological Effects of an Artificial Island, Rincon Island, Punta Gorda, California AUTHOR(S): Johnson, G. F.; Dewit, L. A. SOURCE: U. S. Army Corps of Engineers, Coastal Engr. Research Center, Vicksburg, Miss., CERC Misc. Report No. 78-3, 108 pp;and Coastal Zone '78, Proceedings, Vol. IV; ASCE, N.Y., pp. 2837-2856 DATE: 09/01/78 ABSTRACT: The study documents marine ecological conditions at Rincon Island, which is located offshore between Ventura and Santa Barbara, California. The island, which was constructed between 1957 and 1958 to serve as a permanent platform for oil and gas production, is particularly suitable for ecological study. Habitat features associated with the armor rock and concrete tetrapods surrounding the island support a "microecosystem" which differs in biotic composition from surrounding natural bottom areas. KEYWORDS: Coastal Processes coastal structures, environmental constraints California, South Central Region, Subregion VII, Santa Barbara Cell The Littoral Drift Problem at Shoreline Harbors AUTHOR(S): Johnson, J. W.

SOURCE: Journal of Waterways and Harbors Divn., Proc. Paper 1211, Vol. 83, No. WW1, ASCE, N. Y., pp. 1211-1 to 1211-37 DATE: 02/01/57 ABSTRACT: A harbor which fronts directly on an open shoreline and has a relatively small flow into and out of it is defined as a shoreline harbor. Where a littoral drift occurs along the shoreline certain design, construction, and maintenance problems are present. This paper summarizes some of these basic considerations in generalized terms, and presents a few case histories of typical shoreline harbors for which operational information extending over a long period of years is available. Includes data. KEYWORDS: Coastal Processes coastal structures, longshore transport, sand entrapment California, South Central Region, South Coast Region, San Diego Region The Supply and Loss of Sand to the Coast AUTHOR(S): Johnson, J. W. Journal of Waterways and Harbors Divn., ASCE, N. Y., Vol. 85, SOURCE: pp. 227-251 DATE: 09/01/59 ABSTRACT: A summary of the various sources of supply and loss of sand to the coast with special application on the coast of California from Point Lobos to Santa Barbara. The Santa Ynez and Santa Maria Rivers are identified as the most important in this reach. The Einstein method was used to estimate sediment transport versus water discharge. A table presents the average annual sediment load for the Santa Maria and Santa Ynez Rivers. Areas of sand loss due to wind are identified, primarily Pismo Beach to Point Arguello. KEYWORDS: Hydrology & Hydraulics, Geomorphology river sediment discharge California The Supply of Sand to the Coast AUTHOR(S): Johnson, J. W. SOURCE: Proc. of ASCE, Jounal of the Waterways and Harbors Division, Vol. 85, No. WWS Paper 2177, pp. 227-251 DATE: 09/01/59 ABSTRACT: A summary of supply and loss of sand to California coast from Point Lobos to Santa Barbara. Sediment transport estimates for Santa Maria and Santa Ynez rivers, including size distributions. Includes coastal process: cliff erosion, wind action, littoral drift, submarine canyon losses, and mining of sand. Includes data.

KEYWORDS: Hydrology & Hydraulics, Coastal Processes coastal erosion, grain size, mining, littoral sediment, river sediment discharge California, South Central Region, Subregion VI, Subregion VII The Supply and Loss of Sand to the Coast AUTHOR(S): Johnson, J. W. SOURCE: Journal of Waterways and Harbors Divn., ASCE, N. Y., Vol. 85, pp. 227-251 DATE: 09/01/59 ABSTRACT: A summary of the various sources of supply and loss of sand to the coast with special application on the coast of California from Point Lobos to Santa Barbara. The Santa Ynez and Santa Maria Rivers are identified as the most important in this reach. The Einstein method was used to estimate sediment transport versus water discharge. A table presents the average annual sediment load for the Santa Maria and Santa Ynez Rivers. Areas of sand loss due to wind are identified, primarily Pismo Beach to Point Arguello. KEYWORDS: Hydrology & Hydraulics, Geomorphology river sediment discharge California Sand Movement on Coastal Dunes AUTHOR(S): Johnson, J. W. In: Proc. of the Federal Inter-Agency Sedimentation Conference SOURCE: Conference, 1963, Misc. Publication No. 970; Agricultural Res. Serv., USDA, June 1965, pp. 747-755 DATE: 01/28/63 ABSTRACT: A laboratory study was conducted to try to estimate the rate of transport of sand blown from dunes in California. The results indicate that the Bagnold formula is superior to the Kawamura formula and that water content of the sand is important. No estimates of acutual transport are given. Indicates that on the California coast considerable quantities of sand are moved inland by wind. KEYWORDS: Hydrology & Hydraulics, Geomorphology wind transport, dunes California Summary of Annual Wave Power for Ten Deep Water Stations Along the California, Oregon, Washington Coasts AUTHOR(S): Johnson, J. W.; Moore, J. T.; Ovett, F. B. SOURCE: Hydraulic Engineering Lab., HEL 24-9, College of Engineering, University of California, Berkeley, California, 241 pp. DATE: 01/01/71

ABSTRACT: not reviewed KEYWORDS: Coastal Processes wave climate, wave transformation California Characteristics and Behavior of Pacific Coast Tidal Inlets AUTHOR(S): Johnson, J. W. SOURCE: Journal of Waterways, Harbors and Coastal Engineering Division, ASCE, N. Y., Vol. 99, No. WW3, pp. 325-339 DATE: 08/01/73 ABSTRACT: Attempts to critically examine data from various inlets and aives some assessment of the reliability of the measured quantities, possible reasons for scatter of data, etc. This study was confined to inlets on the Washington, Oregon, and California coasts. All lagoons, estuaries or bays of appreciable size, whether the inlet was open or closed, were considered. KEYWORDS: Coastal Processes tidal inlets, tides California, Oregon, South Central Region, South Coast Region, San Diego Region, Subregion VI, Subregion IX, Subregion X Heavy Minerals in Beach and Stream Sediment as Indicators of Shore Processes Between Monterey and Los Angeles, California AUTHOR(S): Judge, C. W. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Tech. Memo 33, 44 pp. DATE: 11/01/70 ABSTRACT: A study of heavy minerals on the California Coast was made. Beach samples were supplemented by samples from offshore and the rivers. Heavy minerals in the 63-125 micron fraction of the samples were identified by optical techniques. Five provinces were identified. Analyses gave some indication of net littoral transport, but heavy minerals were not definitive indicators of littoral draft from Point Conception to Ventura. KEYWORDS: Coastal Processes beach nourishment/dredging, beach profiles, littoral sediment, longshore transport, grain size, petrology California, South Central Region, Geology of the Santa Monica and San Pedro Basins, California Continental Borderland AUTHOR(S): Junger, A.; Wagner, H. C. SOURCE: Misc. Field Studies Map, MF - 820, U. S. Dept. of Interior, Geological Survey, Reston, Virginia DATE: 01/01/77 ABSTRACT: Maps with geophysical profiles. Scale 1:250,000.

KEYWORDS: Geomorphology geology, maps, neotectonics California, South Coast Region, Subregion IX, Santa Monica Cell, S. Santa Monica Reach, San Pedro Cell El Cordonazo - The Lash of St. Francis AUTHOR(S): Kalstrom, G. W. Weatherwise, Vol. 5, No. 5, p. 99 SOURCE: DATE: 10/01/52 ABSTRACT: "El Cordonaza" refers to tropical storms, although the contemporary descriptions seem to fit southeasters as described by Richard Dana, and which have ceased to plague the region. Describes tropical storms in this century along the California coast, and gives some data as well as storm tracks. KEYWORDS: Oceanography & Meteorology storms/floods California, South Central Region, South Coast Region, San Diego Region Processes Influencing Transportation and Deposition of Sediment on the Continental Shelf, Southern California AUTHOR(S): Karl, H. A. Ph.D. Thesis, University of Southern California, Los Angeles, SOURCE: California, 331 pp. DATE: 11/01/76 ABSTRACT: A three year study indicated that four hydrodynamic provinces comprise San Pedro Shelf, the main study area. Three of these are aligned approximately parallel with the shoreline, a fourth transverse province, present where submarine canyons incise the shelf, is superimposed on shelf parallel provinces. KEYWORDS: Geomorphology, Coastal Processes coastal currents, geomorphic processes, maps, remote sensing, littoral sediment California, South Central Region, South Coast Region, San Diego Region, San Pedro Cell Influence of San Gabriel Submarine Canyon on Narrow-Shelf Sediment Dynamics, Southern California AUTHOR(S): Karl, H. A. SOURCE: Marine Geology, Vol. 34, No. 1-2, pp. 61-78 DATE: 01/01/80 ABSTRACT: not reviewed KEYWORDS: Coastal Processes littoral sediment, longshore transport, offshore/onshore transport, submarine canyons California, South Coast Region, Subregion VIII, San Pedro Cell Erosion and Transport of Sediments and Pollutants in the Benthic Boundary Layer

on the San Pedro Shelf, Southern California - Preliminary Report

AUTHOR(S): Karl, H. A.; Cacchione, D. A.; Drake, D. E. SOURCE: U. S. Department of the Interior, Geological Survey, Open File Report 80-386, 54 pp. DATE: 01/01/80 ABSTRACT: Data gathered over forty days from mid-April to early June, 1978 enabled assessment of dispersal pathways of water-borne sediments in San Pedro Bay, Southern California. Results may not be applicable to seasons other than spring time, and fair weather conditions. Major storms would substantially modify the predicted pathways of sediment dispersal derived from this experiment. Data is included in Appendices A and B. KEYWORDS: Coastal Processes, Geomorphology coastal currents, geomorphic processes, nearshore currents, offshore/onshore transport, California, South Coast Region, Subregion IX, San Pedro Cell Zircon - A Review; With Emphasis on West Coast Resources and Markets AUTHOR(S): Kauffman, A. J.; Holt, D. C. Info. Circular No. 8268, U. S. Dept. of Interior, Bureau of SOURCE: Mines, 69 pp. DATE: 01/01/65 ABSTRACT: Mining of beach sand in California is mentioned as a means of obtaining zircon. KEYWORDS: Geomorphology beaches, mining, petrology California, South Central Region, South Coast Region, San Diego Region, Eureka Cell The Beaches Are Moving: The Drowning of America's Shoreline AUTHOR(S): Kaufman, W.; Pilkey, O. H. ISBN 0-8223-0575-7, Duke University Press, Durham, North SOURCE: Carolina, 336 , αα DATE: 01/01/83 ABSTRACT: America's beaches from coast to coast are evaluated. Historic storm data is presented. Information on discerning dangerous development, on how to choose a safe site, and how to build sensibly and soundly near the shore is provided. Historic storm data. KEYWORDS: Coastal Processes beaches, coastal structures, institutions/planning/mgmt., sea level change, shoreline changes California Baseline Study of Huntington Harbor AUTHOR(S): Kauwling, T. J. SOURCE: Prepared for the Huntington Harbor Corporation Administration,

Huntington Beach, California DATE: 01/01/72 ABSTRACT: not reviewed KEYWORDS: Coastal Processes coastal structures California, South Coast Region, Subregion IX, San Pedro Cell Distribution of Lightning and Man Caused Wildfires in California AUTHOR(S): Keeley, J. E. SOURCE: General Tech. Report PSW-58, Pacific Southwest Forest and Range Experiment Station, U. S. F. S., Berkeley, California, pp. 431-437 DATE: 06/22/81 ABSTRACT: Statistical analysis of fires in California - divided into lightning caused and man caused. Discusses fires patterns and climate. Also discusses correlation patterns of monthly distribution and fuel type area. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics fires California Engineering and Ecological Evaluation of Artificial Island Design, Rincon Island, Punta Gorda, California AUTHOR(S): Keith, J. M.; Skjei, R. E. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, CERC Tech. Memo 43 DATE: 03/01/74 ABSTRACT: Rincon Island is a man-made island composed of armor rock and tetrapod revetments enclosing a sand core. Evaluation after 14 years shows no damages by waves; littoral transport has been unaffected, little subsidence has occurred and a thriving community of marine organisms has developed. KEYWORDS: Coastal Processes coastal structures, environmental constraints, longshore transport, storm damage California, South Central Region, Subregion VII, Santa Barbara Cell Size Distribution of Sand from Dunes, Beaches, and Some Sandstones AUTHOR(S): Keller, W. D. SOURCE: Geological Society of America Bulletin, Vol. 52, p. 1913 DATE: 01/01/41 ABSTRACT: Abstract; samples from 29 localities on the Oregon and California coast collected along lines from the beach inland across beach-derived dunes show a mean phi quartile deviation of .22 for the beach sand but .26 for the dune sand. Beach sand is slightly better sorted. KEYWORDS: Geomorphology, Coastal Processes dunes, geology, geomorphic processes, grain size, littoral sediment California, Oregon, South Central Region, South Coast Region, San Diego Region

Satellite Observations of California Coastal Currents

AUTHOR(S): Kelly, K. A. SOURCE: SIO Reference Series No. 80-14, Scripps Institution of Oceanography, La Jolla, California, 33 pp. DATE: 07/01/80 ABSTRACT: Infrared satellite images are shown for each of two areas near the California coast, Cape Mendocino and Point Conception, and compared with other types of data for the same area and season. Procedures for processing satellite data at Scripps Remote Sensing Facility are discussed; advantages, limitation, and usefullness of satellite data are summarized. KEYWORDS: Coastal Processes coastal currents, remote sensing California, South Central Region, Subregion VII, Santa Barbara Cell Stratigraphic Relations of Upper Cretaceous and Eocene Forma- tions, San Diego Coastal Area, California AUTHOR(S): Kennedy, M. P.; Moore, G. W. SOURCE: American Association of Petroleum Geologists Bulletin, Vol. 55, No. 5, pp. 709-722 DATE: 01/01/71 ABSTRACT: The upper Cretaceous Lusardi, Point Loma, and Cabrillo Formations, along with the Eocene formations Mt. Soledad, Del Mar Torrey Sandstone, Ardath Shale, Scripps Friars, Poway Conglom- erate, Stadium Conglomerate and Mission Valley, are described. The lithologic and stratigraphic relationships are given. KEYWORDS: Geomorphology cliff sediment, geology, maps California, San Diego Region, Subregion X, Oceanside Cell Sea Cliff Erosion at Sunset Cliffs, San Diego AUTHOR(S): Kennedy, M. P. California Geology, Vol. 26, pp. 27-31 SOURCE: DATE: 01/01/73 ABSTRACT: Study of the sea-cliff erosion at Sunset Cliffs, which is the result of ocean-wave action along prominent joints that are oriented obliquely to the cliff face. KEYWORDS: Geomorphology, Coastal Processes cliff sediment, coastal erosion, geology, maps California, San Diego Region, Subregion X, S. Mission Bay Reach History of Ocean Outlets, Los Angeles County Flood Control District AUTHOR(S): Kenyon, E. C. SOURCE: In: Proc. of First Conference on Coastal Engineering, J. W. Johnson, Long Beach, California, pp.277-282 DATE: 10/01/50

ABSTRACT: Describes improvements made in flood control outlets. Gives historical perspective of rivers, particularly Los Angeles and San Gabriel Rivers and Ballona Creek. KEYWORDS: Hydrology & Hydraulics river discharge, river sediment discharge California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, San Pedro Cell Origin and History of Upper Pleistocene Marine Terraces, San Diego, California AUTHOR(S): Kern, J. P. SOURCE: Geological Society of America Bulletin, Vol. 88, pp. 1553-1566 DATE: 01/01/77 Geomorphic, structural, paleontologic, and stratigraphic ABSTRACT: analysis of features of emergent marine terraces is discussed to reconstruct part of the late Pleistocene paleoenvironmental, paleogeographic, and tectonic history of the San Diego area. KEYWORDS: Geomorphology geology, maps, cliff sediment, geomorphic processes, littoral sediment, neotectonics California, San Diego Region, Subregion X, Oceanside Cell Application of a Spectrum Analyzer in Forecasting Ocean Swell in Southern California Coastal Waters AUTHOR(S): Kierluff, L. P. Tech. Memo NWS WR-135, NOAA, National Weather Service SOURCE: DATE: 01/08/79 ABSTRACT: Gives details of spectrum analysis for waves in Southern California, but includes examples of analysis for North Pacific storms, tropical (Eastern North Pacific) storms and waves, and southern hemisphere storms and waves. KEYWORDS: Oceanography & Meteorology, Coastal Processes storms/floods, wave climate California, South Central Region, South Coast Region, San Diego Region Paleogeography of the Mount Soledad Formation West of the Rose Canyon Fault AUTHOR(S): Kies, R. P. SOURCE: In: Geologic Studies in San Diego, Field Trips, P. L. Abbott, Ed., San Diego Assoc. of Geologists, San Diego, California, pp. 1-11 DATE: 01/01/82 ABSTRACT: Detailed field descriptions and line drawings are given for Mount Soledad formations as a means of describing its lithology. KEYWORDS: Geomorphology geology, maps, watershed sediment California, San Diego Region, Subregion X, Oceanside Cell

Tidal Inlet Response to Jetty Construction AUTHOR(S): Kieslich, J. M. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC GITI 19 DATE: 10/01/81 ABSTRACT: Thirteen tidal inlets were selected for a study of the response of inlet ocean entrances to man-made improvements. Inlet entrance behavior following jetty construction was evaluated, and guidelines for the functional design of inlet entrance improvements are suggested. The inlets considered in the study were those where a single updraft or downdrift jetty was built first. KEYWORDS: Coastal Processes coastal structures, sand entrapment, sedimentation, tidal inlets California, Oregon, Mexico Beaches and Coasts AUTHOR(S): King, C. A. SOURCE: Second Edition, Edward Arnold Ltd., London, 570 pp. DATE: 01/01/72 ABSTRACT: This textbook volume is arranged in four parts: the forms and the techniques for studying beaches and coasts; the processes operating to aive the beach and coast their character; sea level fluctuations; beaches, beach material, its movement and the forms it produces. KEYWORDS: Coastal Processes, Geomorphology beaches, beach nourishment/dredging, geology, longshore transport, offshore/onshore transport, sea level change California, South Central Region, South Coast Region, San Diego Region Principal Tracks and Mean Frequencies of Cyclones and Anticyclones in the Northern Hemisphere AUTHOR(S): Klein, W. H. SOURCE: Research Paper No. 40, U. S. Department of Commerce, Weather Bureau, Washington, D. C., 60 pp. DATE: 01/01/57 ABSTRACT: Provides good narrative description of storms, and storm tracks in the Northern Hemishpere. Includes charts of regions of cyclogenesis and anticyclogenesis, frequency (by month) of high and low cells, mean cyclone and anticyclone tracks (by month). KEYWORDS: Oceanography & Meteorology climatology, storms/floods California Geographical Frequency of Troughs and Ridges on Mean 700 mb Charts AUTHOR(S): Klein, W. H.; Winston, J. S. SOURCE: Monthly Weather Review, Vol. 86, No. 9, pp. 344-358 DATE: 09/01/58

Geographical frequencies of occurences of troughs and ridges ABSTRACT: on 5 day and 30 day mean 700 mb charts for Northern Hemishpere. Although some items are related to orography, seasonal features are shown which are important in mean weather patterns. Gives good description of patterns, provides charts by month; averages taken over 1933-1955 period. KEYWORDS: Oceanography & Meteorology climatology California Sediment discharge in the Upper Arroyo Grande and Santa Rita Creek Basins, San Luis Obispo County, California AUTHOR(S): Knott, J. M. SOURCE: Water Resources Investigations No. 76-64, U. S. Geological Survey, 32 pp. DATE: 06/01/76 ABSTRACT: Used data from the U.S. Geological Survey sediment measurement program for the upper Arroyo Grande in San Luis Obispo. Measurement period was from 1968 through 1973. Estimates calculated for 1943 through 1972 period. Single day transport often accounts for 40 percent or more of the annual yield of sediment. Includes both suspended load measurements and bed load estimates. Value of paper is analyses; data are also available. KEYWORDS: Hydrology & Hydraulics river discharge, river sediment discharge California, South Central Region, Feasibility Report - Ventura Marina, for Ventura Port District, Board of Port Commissioners AUTHOR(S): Koebig and Koebig, Inc. Koebig and Koebig, Inc., Ventura, California, 157 pp. SOURCE: DATE: 12/01/67 Information on the planning, architecture, engineering, ABSTRACT: oceanographic, economic, and financial aspects of the problem, to serve as a basic guide for action leading to an early solution of the current problem. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, growth potential/recreation, population, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell Classification of Sand and Gravel Resource Areas, San Gabriel Valley Production-Consumption Region AUTHOR(S): Kohler, S. L. SOURCE: Special Report 143, Part IV, Calif. Div. of Mines and Geology, Sacramento, California, 20 pp.

DATE: 01/01/82 ABSTRACT: Geographic zones where sand and gravel materials can be mined are shown on several topographic quadrangle map sheets. KEYWORDS: Geomorphology geology, maps, mining California, South Coast Region, Subregion IX, San Pedro Cell Mineral Land Classification: Aggregate Materials in the Western San Diego County Production-Consumption Region AUTHOR(S): Kohler, S. L.; Miller, R. V. SOURCE: Special Report 153, Calif. Division of Mines and Geology, Sacramento, California, 28 pp. DATE: 01/01/82 ABSTRACT: Geographic zones where sand and gravel materials can be mined are shown on topographic quadrangle map sheets. KEYWORDS: Geomorphology geology, maps, mining California, San Diego Region, Subregion X, Oceanside Cell Marine Geochronology With Pb-210 AUTHOR(S): Koide, M.; Soutar, A.; Goldberg, E. D. SOURCE: Earth and Planetary Sciences Letters, Vol. 14, pp. 442-446 DATE: 01/01/72 ABSTRACT: Lead-210 isotope is used to date marine cores (to determine the rate of sedimentation) plus-or-minus 1 year accuracy to 200 years before present. Study cores were collected from the Santa Barbara Basin. KEYWORDS: Geomorphology geomorphic processes, offshore/onshore transport, sedimentation California, South Central Region, Subregion VII, Santa Barbara Cell Inland Artificial Sediment Movements AUTHOR(S): Kolker, O. C. SOURCE: In: Sediment Management for Southern California Mountains, Coastal Plains and Shoreline; Cal Tech Environmental Quality Laboratory Report 17-D, Pasadena, California, pp. 27-50 DATE: 06/01/82 ABSTRACT: Account of sediment movement due to debris basin and channel cleanouts, and sand and gravel mining operations. Quantity moved by mining operations from 1934-1976 was approximately ten times more than sediment moved from cleanouts (1,219 million tonnes by mining). Gives cleanouts, mining by county; indicates that many records are not kept, making estimates difficult. KEYWORDS: Hydrology & Hydraulics mining, reservoirs, river-bed sediment, sedimentation California, South Central Region,

Oceanography of the Santa Barbara Channel AUTHOR(S): Kolpak, R. L. SOURCE: In: Biological and Oceanographic Survey of the Santa Barbara Oil Spill 1969-1970, R. Kolpak, Ed., Allen Hancock Foundation, Univ. of So. Calif., Los Angeles, Calif., Vol. 2, pp. 90-180 DATE: 01/01/71 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, tides, wave climate California, South Central Region, Subregion VII, Santa Barbara Cell Longshore Sand Transport on Beaches AUTHOR(S): Komar, P. D.; Inman, D. L. SOURCE: Journal of Geophysical Research, Vol. 75, No. 30, pp. 5914-5927 DATE: 10/20/70 ABSTRACT: Simultaneous field measurements of wave and current parameters in the surf zone and the resulting longshore transport of sand have been made on two beaches under a variety of conditions. KEYWORDS: Coastal Processes beaches, longshore current, longshore transport, wave climate, wave transformation California, Mexico, San Diego Region, Subregion X, Silver Strand Cell, S. Silver Strand Reach Nearshore Currents and Sediment Transport, and the Resulting Beach Configuration AUTHOR(S): Komar, P. D. SOURCE: Marine Sediment Transport and Environmental Management, D. J. Stanley and J. P. Swift, Eds., pp. 241-254 DATE: 01/01/76 ABSTRACT: not reviewed KEYWORDS: Coastal Processes beaches, littoral sediment, longshore transport, nearshore currents California Beach Sand Transport: Distribution and Total Drift AUTHOR(S): Komar, P. D. SOURCE: Journal of Waterways, Ports, Coastal, and Ocean Division, ASCE, N. Y., Vol. 103, No. 2, pp. 225-239 DATE: 05/01/77 ABSTRACT: Considerable data have been collected in laboratory wave basins relating the sand transport rate to the wave conditions. This study undertakes a review of laboratory data in an attempt to determine if any scaling laws can account for the scatter - laws which might indicate how the transport rate is a function of grain size and density. KEYWORDS: Coastal Processes

longshore current, grain size, littoral sediment, longshore transport, wave transformation California Relative Quantities of Suspension Versus Bed-Load Transport on Beaches AUTHOR(S): Komar, P. D. SOURCE: Journal of Sedimentary Petrology, Vol. 48, No. 3 DATE: 09/01/78 ABSTRACT: Whether suspension or bed-load transport is most important in the longshore movement of sands on beaches is uncertain. A model based on measured concentrations of suspended sediments in the surf zone indicates that the suspended load comprises 25 per cent of the total drift, the bed-loading forming the remaining 75 per cent. KEYWORDS: Coastal Processes littoral sediment, longshore current, longshore transport, grain size California The La Crescenta Flood: Real Origin of California's New Year Catastrophe Traced to Mountain Slopes Recently Swept by Fire AUTHOR(S): Kraebel, C. J. SOURCE: Los Angeles County Flood Control District, Hydraulic Department, Unpublished Report, Los Angeles, California, 53+ pp. DATE: 01/01/37 ABSTRACT: Gives background information for the La Crescenta flood of December 30, 1933 to June 1, 1934. Gives statistics showing that the flood was not caused by the fifteen minute cloud burst, but by the heavy rain on a recently burned watershed. Gives some data showing the effects of fires on runoff and erosion rates. KEYWORDS: Hydrology & Hydraulics fires, storms/floods, watershed sediment California, South Coast Region, Subregion IX Seasonal Debris Movement from Steep Mountain Slopes in Southern California AUTHOR(S): Krammes, J. SOURCE: In: Proc. of a Federal Inter-Agency Sedimentation Conference, U. S. Department of Agriculture, Misc. Publication No. 970, pp. 85-88 DATE: 01/01/63 ABSTRACT: Reports the results from erosion studies in Southern California. Gives both pre-fire and post-fire debris production. "Post- fire" in this case is for three years following the fire. KEYWORDS: Hydrology & Hydraulics fires, watershed sediment, watersheds

California, South Central Region, South Coast Region, Subregion VII, Subregion VIII, Subregion IX Erosion From Mountainside Slopes After Fire in Southern California AUTHOR(S): Krammes, J. S. SOURCE: Report No. PSW-171, U. S. Forest Service , Pacific Southwest Forest and Range Experiment Station, Berkeley, California, 8 pp. DATE: 11/01/60 ABSTRACT: Account of dry and wet erosion before and after the July 21, 1960 fire in the San Dimas experimental forest, near Glendora. Tables of preand post-fire erosional estimates. KEYWORDS: Hydrology & Hydraulics fires, watershed sediment California, South Coast Region, Subregion IX, San Pedro Cell Lithology and Sedimentation in the Southern Continental Borderland AUTHOR(S): Krause, D. C. In: Papers in Marine Geology, Shepard Commemorative Volume, R. SOURCE: I. Miller, Ed., Macmillan & Co., N. Y., pp. 274-305 DATE: 01/01/64 ABSTRACT: The Fanfare Expedition in July 1959 was the first in a series of cruises in this study of the southern continental borderland between Point Conception, California and Vizcaino Peninsula, Baja California. Until the present study, the southern area was little known. Twenty-one sediment cores and 17 rock dredge samples were secured, and many other operations were performed. This paper is devoted to the rock and sediment samples, the photography, and bathymetry as related to the samples. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, littoral sediment, sedimentation California, South Central Region, South Coast Region, San Diego Region Synoptic Weather Types of North America AUTHOR(S): Krick, I. P.; Elliot, R. D. SOURCE: California Institute of Technology, Meteorology Department, Pasadena, California, 161 pp. DATE: 12/01/43 ABSTRACT: General outline of basic weather types of North America. Includes North Eastern Pacific weather, weather maps with discussion of features of each type. KEYWORDS: Oceanography & Meteorology climatology California Chronological Studies in Santa Barbara Basin AUTHOR(S): Krishnaswami, D. L.; Amin, B. S.; Soutar, A.

SOURCE: Limnology and Oceanography, Vol. 18, No. 5, pp. 763-770 DATE: 01/01/73 ABSTRACT: Sedimentation rates of 3-4 mm per year were determined from a core taken in the Santa Barbara Basin. KEYWORDS: Geomorphology geology, geomorphic processes, offshore/onshore transport, sedimentation California, South Central Region, Subregion VII, Santa Barbara Cell Preliminary Determination of Sediment Discharge, San Juan Drainage Basin, Orange and Riverside Counties AUTHOR(S): Kroll, C. G.; Porterfield, G. U. S. Dept. of Interior, Geological Survey, Water Resources SOURCE: Division, Menlo Park, California, 28 pp. DATE: 12/16/69 ABSTRACT: Based on sediment measurements made in 1967 and 1968, a sediment versus water discharge relation was derived for San Juan Creek and Arroyo Trabuco. This was applied to water discharge records from 1931-1968 to obtain mean daily and average annual sediment discharges. KEYWORDS: Hydrology & Hydraulics river sediment discharge California, South Coast Region, Subregion X, Oceanside Cell Preliminary Determinations of Sediment Discharge, San Juan Drainage Basin, Orange and Riverside Counties, California AUTHOR(S): Kroll, C. G.; Porterfield, G. SOURCE: In: Study of Beach Nourishment Along the Southern Calif. Coast, Dept. Nav. and Ocean Dev., Sacramento, Calif.; U.S. Geo. Survey, Water Res. Div., Open File Rpt., Menlo Park, Calif., 28 pp. DATE: 12/16/69 During the 1967 and 1968 water years the mean daily suspended ABSTRACT: sediment discharges at the gaging stations on San Juan Creek and its major tributary, Arroyo Trabuco, near San Juan Capistrano, California, were 266 tons and 124 tons, respec- tively. Extrapolated over the 38 years of waterdischarge record 1931-68, the mean daily suspended-sediment discharge at the gaging stations was 124 tons at San Juan Creek and 44 tons at Arroyo Trabuco. The mean daily coarse-sediment discharge for the same 38-year peiod was about 180 tons at San Juan Creek and 6.1 tons at Arroyo Trabuco. The discharge of coarse sedi-KEYWORDS: Hydrology & Hydraulics, Coastal Processes beach nourishment/dredging, river sediment discharge, urbanization California, San Diego Region, Subregion X, Oceanside Cell

Preliminary Determination of Sediment Discharge, San Juan Drainage Basin,

Orange and Riverside Counties AUTHOR(S): Kroll, C. G.; Porterfield, G. SOURCE: U. S. Dept. of Interior, Geological Survey, Water Resources Division, Menlo Park, California, 28 pp. DATE: 12/16/69 ABSTRACT: Based on sediment measurements made in 1967 and 1968, a sediment versus water discharge relation was derived for San Juan Creek and Arroyo Trabuco. This was applied to water discharge records from 1931-1968 to obtain mean daily and average annual sediment discharges. KEYWORDS: Hydrology & Hydraulics river sediment discharge California, South Coast Region, Subregion X, Oceanside Cell Estimate of Sediment Discharges, Santa Ana River at Santa Ana and Santa Maria River at Guadalupe, California AUTHOR(S): Kroll, C. G. Report No. WRI 40-74, U. S. Dept. of Interior, Geological SOURCE: Survey, Water Resources Division, Menlo Park, California, 23 pp. DATE: 02/01/75 ABSTRACT: Records from 1968-1971 were used to estimate sediment versus water discharge for the Santa Ana and Santa Maria Rivers, and were applied to discharge records for 1941 to 1971 to estimate mean daily and average annual sediment discharge. KEYWORDS: Hydrology & Hydraulics river sediment discharge California, South Central Region, South Coast Region, Santa Maria River Cell, San Pedro Cell Estimate of Sediment Discharges, Santa Ana River at Santa Ana and Santa Maria River at Guadalupe, California AUTHOR(S): Kroll, C. G. Report No. WRI 40-74, U. S. Dept. of Interior, Geological SOURCE: Survey, Water Resources Division, Menlo Park, California, 23 pp. DATE: 02/01/75 ABSTRACT: Records from 1968-1971 were used to estimate sediment versus water discharge for the Santa Ana and Santa Maria Rivers, and were applied to discharge records for 1941 to 1971 to estimate mean daily and average annual sediment discharge. Approximately 99% of all coarse sediment was transported in 1% (113 days) of the 31 year period. KEYWORDS: Hydrology & Hydraulics river sediment discharge California, South Central Region, South Coast Region, Santa Maria River Cell, San Pedro Cell

The Analysis of Observational Data From Natural Beaches AUTHOR(S): Krumbein, W. C. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington D. C., BEB Tech. Memo No. 130, 59 pp. DATE: 11/01/61 ABSTRACT: Information is presented for mathematical and statistical approaches to handle large and complex sets of data with use of high-speed computers in analysis of natural beach data. The information is designed in part to set these newer approaches toward natural beach studies in a framework that shows the relation between wave tank data and natural beach data. Certain underlying models, conceptual, physical, and statistical, that apply in the two cases, are discussed and in part illustrated. Limited data of the scope necessary for illustration were available from studies designed for other uses at Mission Beach, California, and generalizations derived from analysis of these data are used in discussion of the design of field beach KEYWORDS: Coastal Processes beaches, beach nourishment/dredging, longshore transport, offshore/onshore transport, wave climate, wave transformation California, San Diego Region, Subregion X, Mission Bay Cell Spatial and Temporal Variations in Geometric and Material Properties of а Natural Beach AUTHOR(S): Krumbein, W. C.; James, W. R. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, CERC Tech. Memo 44, 79 pp. DATE: 06/01/74 ABSTRACT: The influence of erosion and deposition during successive tidal cycles was examined. Results show differences in some aggregate properties. Maps were made at intervals over a 3-year period on a beach upcoast of Point Mugu, California, of open unimpeded segments and upbeach and downbeach of an impermeable steel sheet pile groin. The mapped properties form a highly interlocked complex of foreshore responses to ongoing shore processes. KEYWORDS: Coastal Processes beach profiles, grain size, littoral sediment, longshore transport, offshore/onshore transport, California, South Central Region, Subregion VII, Santa Barbara Cell Accelerated Beach Cliff Erosion Related to Unusual Storms in Southern

California

AUTHOR(S): Kuhn, G. G.; Shepard, F. P. SOURCE: In: Geology, California Division of Mines and Geology, Sacramento, California, pp. 58-59 DATE: 01/01/79 ABSTRACT: The effects of severe storms are described for the winter of 1977-1978 and the intense storms in late 1940 that destroyed low-lying beach front and bluff property on the Southern California coast. KEYWORDS: Geomorphology, Coastal Processes cliff sediment, geology, geomorphic processes, coastal erosion, storms/floods California, San Diego Region, Subregion X, Oceanside Cell Coastal Erosion in San Diego County, California AUTHOR(S): Kuhn, G. G.; Shepard, F. P. SOURCE: In: Earthquakes and Other Perils, San Diego Region, P. L. Abbott and W. J. Elliott Eds., San Diego Assoc. of Geologists, San Diego, California, pp. 207-216 DATE: 01/01/79 ABSTRACT: The reported retreat rates were studied. The past 25-to-30 vear period was characterized by low rainfall and few storms capable of producing heavy surf and unusually slow erosion. Poorly indurated bluffs near Scripps Institution of Oceanog- raphy at La Jolla retreated 3 to 6 m (10 to 20 feet) between 1923 and 1930. The same area eroded at a rate of about one foot per year during storm periods just prior to 1947. KEYWORDS: Geomorphology, Coastal Processes cliff sediment, coastal erosion, geology, maps, shoreline changes California, San Diego Region, Subregion X, Accelerated Beach-Cliff Erosion Related to Unusual Storms in Southern California AUTHOR(S): Kuhn, G. G.; Shepard, F. P. SOURCE: California Geology, Vol. 32, No. 3 DATE: 03/01/79 not reviewed ABSTRACT: KEYWORDS: Coastal Processes coastal erosion, geomorphic processes, storms/floods California, South Central Region, South Coast Region, San Diego Region Coastal Erosion in San Diego County, California AUTHOR(S): Kuhn, G. G.; Shepard, F. P. SOURCE: Coastal Zone '80, Symposium, Hollywood, Florida, November 17-20, 1980; ASCE, N. Y., Vol. III, pp. 1899-1918 DATE: 01/01/80 ABSTRACT: History and examples of coastal erosion in the San Diego coastal region. KEYWORDS: Coastal Processes, Geomorphology

beaches, coastal erosion, coastal erosion problems, geomorphic processes, storm damage California, San Diego Region, Subregion X, Oceanside Cell, S. Oceanside Reach, Mission Bay Cell, S. Mission Bay Reach, Silver Strand Cell Coastal Erosion in San Diego County, California AUTHOR(S): Kuhn, G. G.; Shepard, F. P. SOURCE: Coastal Zone '80, Hollywood, Florida; ASCE, N.Y., pp. 1899-1918 DATE: 01/01/80 ABSTRACT: Earlier studies of coastal erosion in the area which provided a far less optimistic picture of the stability of sea cliffs were ignored or discounted. This study identified that the cited low retreat rates were usually based on the experience of the last 25 or 30 years only, an unusually benign and quiescent time, characterized by low rainfall and few local storms capable of producing heavy surf. Developers justified the increasing land development by stating that none of these sea cliffs were retreating at an appreciable rate. KEYWORDS: Geomorphology, Coastal Processes coastal erosion, coastal structures, geology, growth potential/recreation, shoreline changes, cliff sediment California, San Diego Region, Subregion X, Greatly Accelerated Man-Induced Coastal Erosion and New Sources of Beach Sand, San Onofre State Park and Camp Pendleton, No. San Diego County, Calif. AUTHOR(S): Kuhn, G. G.; Baker, E. D.; Campen, C. SOURCE: Office of Sea Grant Report, Scripps Institution of Oceanography, La Jolla, California, 7 pp.; and Shore & Beach, Vol. 48, No. 4, pp. 9-13 DATE: 10/01/80 The study investigates significant but previously ABSTRACT: unrecognized source of coarse beach sand that can replenish beaches at Oceanside and Carlsbad eroded during 1978-1980. As much as 460 feet of headward erosion occurred on one canyon between 1968 and 1980. Also, landslides are activated during wet years. Both canyon head erosion and landslides are presently contributing significant quantities of sand to the beaches in the Oceanside Littoral Cell. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, cliff sediment, geomorphic processes, littoral sediment California, San Diego Region, Subregion X, Oceanside Cell Should Southern California Build Defenses Against Violent Storms Resulting in Lowland Flooding as Discovered in Records of Past Century

AUTHOR(S): Kuhn, G. G.; Shepard, F. P. SOURCE: Shore and Beach, Vol. 49, pp. 3-10 DATE: 01/01/81 ABSTRACT: Gives storm history of Southern California and presents Southern California waves from: Aleutian Island storms, west waves, southern hemisphere swell. In 1800's :Southeasters" were common until 1850 with 50 to 60 ft waves. Storms probably were related to tropical waters in the San Diego region. Tropical fish were identified near San Diego, but disappeared after 1860. Maior erosion events are noted, as well as flooding and rainfall events of the past century. Some of these events (such as the floods of 1862) were for worse than anything recorded previoulsy. Discusses impact of volcanic events. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics climatology, storms/floods, cliff sediment California, South Central Region, South Coast Region, San Diego Region Should Southern California Build Defenses Against Violent Storms Resulting in Lowland Flooding as Discovered in Records of Past Century AUTHOR(S): Kuhn, G. G.; Shepard, F. P. SOURCE: Shore & Beach, Vol. 49, No. 4, 2 pp. DATE: 10/01/81 ABSTRACT: not reviewed KEYWORDS: Coastal Processes coastal erosion, coastal erosion problems, storm damage California, South Central Region, South Coast Region, San Diego Region Newly Discovered Evidence from the San Diego County Area of Some Principles of Coastal Retreat AUTHOR(S): Kuhn, G. G.; Shepard, F. P. Shore & Beach, Vol. 51, No. 1, pp. 3-12 SOURCE: DATE: 01/01/83 ABSTRACT: As a result of various investigations at Oceanside and Carlsbad, certain previously unknown features of coastal erosion have been uncovered. These are presented and discussed. KEYWORDS: Coastal Processes, Geomorphology beaches, coastal erosion, coastal structures, longshore transport, shoreline changes California, San Diego Region, Subregion X, Oceanside Cell Beach Processes and Sea Cliff Erosion in San Diego County, California AUTHOR(S): Kuhn, G. G.; Shepard, F. P. SOURCE: In: Handbook of Coastal Processes and Erosion, P. D. Komar, Ed., Chapter 13; CRC Press Inc., Boca Raton, Florida, pp. 267-284 DATE: 01/01/83 ABSTRACT: Examines evidence of changing weather conditions in southern

California and considers its effects on the beaches and sea cliff erosion. Includes man-induced erosion of sea cliffs. KEYWORDS: Coastal Processes, Geomorphology beaches, climatology, coastal erosion, coastal erosion problems, geomorphic processes California, San Diego Region, Subregion X Sea Cliffs, Beaches and Coastal Valleys of San Diego County AUTHOR(S): Kuhn, G. G.; Shepard, F. P. SOURCE: University of California Press; Berkeley and Los Angeles, California; London, England; 193 pp. DATE: 01/01/84 ABSTRACT: Examines and analyses threats to coastal stability in a detailed study of the coastal area of San Diego County from the 19th century to the present: weather, erosion, landslides, flooding, and currents. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, coastal erosion problems, beaches, climatology, geomorphic processes, storm damage California, San Diego Region, Subregion X, Oceanside Cell, S. Oceanside Reach. Mission Bay Cell, S. Mission Bay Reach, Silver Strand Cell Variations of Sea Level on the Pacific Coast of the United States AUTHOR(S): La Fond, E. C. SOURCE: Journal of Marine Research, Vol. 2, pp. 17-29 DATE: 01/01/39 ABSTRACT: not reviewed KEYWORDS: Coastal Processes sea level change, tides California, Oregon, Mexico Quaternary Marine Shorelines and Coastal Deformation, San Diego to Santa Barbara, California AUTHOR(S): La Joie, K. R.; Kern, J. P.; Wellmiller, J. F. SOURCE: In: Geological Excursions in the Southern California Area, P. ь. Abbott, Ed., Department of Geological Sciences, San Diego State University, San Diego, California, pp. 3-15 DATE: 01/01/79 This report describes sequences of emergent marine terraces ABSTRACT: and beach ridges that record a series of Quaternary sea level highstands superimposed on tectonically rising segments of the Southern California coast between Santa Barbara and San Diego. Ages and elevations of marine terraces were determined and these established drastically different rates of vertical crustal deformation in these two tectonically active areas. KEYWORDS: Geomorphology

geology, geomorphic processes, maps, neotectonics California, South Coast Region, Current Measurements Off the California Coast, 1972 AUTHOR(S): Lam, R. K. SOURCE: SIO Reference No. 74-12, Scripps Institution of Oceanography, La Jolla, California, 17 pp. DATE: 05/01/74 ABSTRACT: During 1972 a number of current meters were deployed to investigate the flow of the California current. A semi- continuous record of bottom currents at 4 km bottom depth about 185 km offshore from Point Conception was obtained over a 160-day period. Also, a 25-day current record was obtained offshore from Scripps Institution of Oceanography. KEYWORDS: Coastal Processes coastal currents California, South Central Region, San Diego Region, Subregion VII, Subregion X, Santa Barbara Cell, Oceanside Cell Crystalline Rocks of the Corona, Elsinore and San Luis Rey Quadrangles, Southern California AUTHOR(S): Larsen, E. S. SOURCE: Bulletin 159, California Division of Mines, pp. 7-50 DATE: 01/01/51 ABSTRACT: The batholith in the area studied was emplaced by more than 20 separate injections. In the area studied in detail five rock types are present in many large, widely separate bodies, making up about 88 percent of the area underlain by the batholith. KEYWORDS: Geomorphology geology, grain size, maps, petrology, watershed sediment California, San Diego Region, Subregion X, Oceanside Cell Report on Flood of January 21-23, 1943 AUTHOR(S): Laverty, F. B. SOURCE: Los Angeles County Flood Control District, Unpublished Report, Los Angeles, California, 56+ pp. DATE: 08/01/43 ABSTRACT: A summary of meteorological factors and description of precipitation (distribution, intensity) and runoff. Includes debris measurements and data appendix. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, river sediment discharge, storms/floods California, South Coast Region, Subregion VIII, Santa Monica Cell, Subregion IX, San Pedro Cell Sea Bottom Off the Coast of Southern California

AUTHOR(S): Lawson, A. C. SOURCE: Geological Society of America Bulletin, No. 61, pp. 1225-1242 DATE: 01/01/50 not reviewed ABSTRACT: KEYWORDS: Coastal Processes, Geomorphology geology, sedimentation California, South Central Region, South Coast Region, San Diego Region Trend-Surface Analysis of Textural Data from the Southern California Borderland AUTHOR(S): Le Feuer, R. D.; Anderhalt, R.; Reed, W. E. SOURCE: Geology Society of America, Vol. 9, No. 4, p. 451 DATE: 02/01/77 ABSTRACT: Abstract; this abstract describes sediment samples that were collected from an area south of Point Dume that lies largely on the south-facing mainland slope, and is cut by several submarine canyons, including Dume Canyon. The trends of the median, mean grain size, and sand percentage show a general fining downslope. There is no calculated trend associated with the canyon. KEYWORDS: Geomorphology geomorphic processes, grain size, littoral sediment, submarine canyons California, South Central Region, Subregion VII, Santa Barbara Cell Description of Grain-Sine Curve From Sequences: A New Attempt AUTHOR(S): Le Roy, S. D. SOURCE: Ph.D. Thesis, University of Southern California, Los Angeles, California, 123 pp. DATE: 08/01/81 ABSTRACT: Grain size "Delta" variate analyses are given for many samples collected across the continental shelf. KEYWORDS: Geomorphology geomorphic processes, grain size, littoral sediment, maps California, South Coast Region, Subregion VIII, Santa Monica Cell Distant and Local Tsunamis in Coastal Regions AUTHOR(S): Lee, J. J.; Kim, S. T.; Ayer, R. M.; Chang, J. J. SOURCE: Report No. NSF/RA-800511, National Science Foundation Contract, University of Southern California, Dept. of Engineering, Los Angeles, California, 92 pp. DATE: 12/01/80 ABSTRACT: The generation and propagation of tsunamis occurring in coastal regions between November, 1977 and April, 1980 are analyzed. Focus is on three subject areas: (1) the generation of water waves by three-dimensional bed motion; (2) a viscous model for non-linear dispersive waves; and (3) the propagation of linear periodic waves over submarine trenches. The experimental design for each phase is presented including its problem formulation and both theoretical and numerical analyses. KEYWORDS: Coastal Processes

neotectonics, tsunamis, wave climate, wave transformation California, Oregon, Mexico Sea Cliff Erosion in Southern California AUTHOR(S): Lee, L. J. SOURCE: Coastal Zone '80, Symposium, Hollywood, Florida, November 17-20, 1980; ASCE, N. Y., Vol. III, pp. 1919-1938 DATE: 01/01/80 ABSTRACT: A study of a portion of the coastline in San Diego County, California has provided insight into erosional processes of sea cliffs. Results and review of literature suggest methods for monitoring erosion in the future. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, coastal erosion problems, geomorphic processes, cliff sediment California, San Diego Region, Subregion X, Oceanside Cell, S. Oceanside Reach, Mission Bay Cell, S. Mission Bay Reach, Silver Strand Cell Sunset Cliffs Stabilization, San Diego, California AUTHOR(S): Lee, L. J.; Crampton, W. Coastal Zone '80, Symposium, Hollywood, Florida, November 17-SOURCE: 20, 1980; ASCE, N. Y., Vol. III, pp. 2271-2290 DATE: 01/01/80 ABSTRACT: Study of the sea cliff erosion at Ocean Beach, California. Includes photos. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, coastal erosion problems, geomorphic processes, cliff sediment, coastal structures, shore protection California, San Diego Region, Subregion X, Mission Bay Cell Recreation - Marine Promise AUTHOR(S): Lee, P.; Glantz, D.; Pine, R. SOURCE: In: Discussion and Overview of the National Conference on Marine Recreation, S. H. Anderson, Ed., Newport Beach, California, 232 pp. DATE: 09/02/75 ABSTRACT: The study discusses recreational uses of the marine environment. KEYWORDS: Coastal Processes, Socioeconomics growth potential/recreation, institutions/planning/mgmt. California Geomorphology and Oceanography of Topanga Beach, California, in Relation to a Small Boat Launching Facility AUTHOR(S): Leneman, M. SOURCE: M. S. Thesis, University of Southern California, Los Angeles, California DATE: 01/01/76 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology

coastal structures, geomorphic processes, beaches California, South Coast Region, Subregion VIII, Santa Monica Cell Nearshore Marine Bedforms Formative Processes, Distribution, and Internal Structures AUTHOR(S): Lenhart, R. SOURCE: Ph.D. Thesis, University Microfilm, University of Cincinatti, Ann Arbor, Michigan DATE: 01/01/79 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geomorphic processes, littoral sediment, sedimentation California Ocean Station Del Mar Current Meter Campaign, 1978-1979 Data Report AUTHOR(S): Lentz, S. J.; Winant, C. D. SOURCE: SIO Reference No. 79-27, Scripps Institution of Oceanography, La Jolla, California, 77 pp. DATE: 12/01/79 ABSTRACT: Velocity and temperature measurements were recorded from May 16, 1978 to March 27, 1979 off Del Mar, California using VMCM current meters. Wind measurements were taken off Scripps pier from October 17, 1978 to March 27. 1979. Statistics and time series of the data are presented in this report. A data tape containing the current meter data was also prepared. KEYWORDS: Coastal Processes coastal currents, wind, nearshore currents California, San Diego Region, Subregion X, Oceanside Cell General Navigation Features of the Harbor for Santa Barbara Bayshores at Goleta, California AUTHOR(S): Lillevang, O. J. SOURCE: Unpublished paper, 35 pp. DATE: 06/01/65 ABSTRACT: A technical presentation of the design decisions that have been reached for the general navigation features of the Santa Barbara Bayshores project harbor. Includes data. KEYWORDS: Coastal Processes hydrographic surveys, institutions/planning/mgmt., coastal structures, shoreline use California, South Central Region, Subregion VII, Santa Barbara Cell A Detailed Model Study of Damage to a Large Breakwater and Model Verification of Concepts for Repair and Upgraded Strength AUTHOR(S): Lillevang, O. J.; Raichlen, F.; Cox, J. C.; Behnke, D. L. SOURCE: Coastal Engineering Abstracts, 19th International Conference on

Coastal Engineering, Houston, Texas, September 3-7, 1984; ASCE, N. Y., p. 384 DATE: 09/01/84 ABSTRACT: The January 1981 storm and damage, and final breakwater design in place by the 1984 summer months, is discussed in detail. KEYWORDS: Coastal Processes coastal structures, storm damage, wave climate, wave transformation California, South Central Region, Subregion VI, Morro Bay Cell Conglomerate Facies, Eocene Fluvial to Shelf Submarine Channel Deposits, San Diego County, California AUTHOR(S): Link, M. H.; Howell, D. G. SOURCE: Geologic Society of America, Annual Meeting, Denver, Colorado, Vol. 8, No. 6, pp. 979-980 DATE: 01/01/69 Abstract; geologic and lithologic descriptions of the Eocene ABSTRACT: conglomerates. KEYWORDS: Geomorphology cliff sediment, geology California, San Diego Region, Subregion X, Oceanside Cell California Hydrography AUTHOR(S): Lippincott, J. B. SOURCE: Paper No. 81, U. S. Geological Survey, Water Supply and Irrigation, Washington, D. C., 489 pp. DATE: 01/01/03 ABSTRACT: Gives an excellent turn of the century account of hydrology in California. Includes: precipitation at selected gages, streamflow on selected rivers, and other data. Rivers, include Sweetwater River, San Luis Rey River, Santa Ana River, Lytle Creek, San Gabriel River, Los Angeles River, Arroyo Seco, Malibu Creek, and Santa Ynez River. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge California, South Central Region, South Coast Region, San Diego Region Water Problems of Santa Barbara, California AUTHOR(S): Lippincott, J. B. SOURCE: Paper No. 116, U. S. Geological Survey, Water-Supply and Irrigation, Washington, D. C., 99 pp. DATE: 01/01/05 ABSTRACT: Presents details of hydrology in Santa Barbara County in 1905. Includes discharge data for the Santa Ynez River plus small creeks and Ventura River, and watershed descriptions. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge California, South Central Region, Subregion VII, Santa Barbara Cell

Water Supply of San Bernardino Valley AUTHOR(S): Lippincott, J. B. SOURCE: 19th Annual Report, Part IV, U. S. Geological Survey, 1898, pp. 540-632 DATE: 01/01/98 ABSTRACT: Description of San Bernardino coastal watershed area from a hydrologic point of view. Includes some early runoff and streamflow estimates, but not a lot of data. KEYWORDS: Hydrology & Hydraulics river discharge, watersheds California, South Coast Region Mainland Rocky Intertidal Aerial Survey from Point Arguello to to Point Loma, California AUTHOR(S): Littler, M. M.; Littler, D. S. SOURCE: BLM Contract No. YN010-CT9-4, U. S. Dept. of Interior, Bureau of Land Management, Pacific OCS Office, Los Angeles, California, 47 pp. DATE: 05/26/80 ABSTRACT: Data collected during helicopter overflights and supplemented by ground observations on predominantly rocky intertidal coastline, December 1979 through December 1980 and January 16-17 1980; primarily low-tide, 15-30 meters altitude. In addition to major zonal assemblage, extent of sandy beaches. boulder beaches, and rocky-intertidal substrates were quantified, detailed, and mapped. KEYWORDS: Coastal Processes aerial photography, beaches, maps, environmental constraints, littoral sediment California, South Central Region, South Coast Region, San Diego Region Longshore Currents Generated by Obliquely Incident Sea Waves AUTHOR(S): Longuet-Higgins, M. S. SOURCE: Journal of Geophysical Research, Vol. 75, p. 33 DATE: 01/01/70 ABSTRACT: not reviewed KEYWORDS: Coastal Processes longshore current, wave climate, wave transformation California 1983 Storm Report, Los Angeles County, February 26 - March 6, 1983 AUTHOR(S): Los Angeles County Flood Control District SOURCE: Los Angeles County Flood Control District, Los Angeles California, 41+ pp. DATE: 06/01/83 ABSTRACT: A report on the 1983 storm and flood in Los Angeles. Includes data and photos. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics

precipitation, river discharge, watershed sediment California, South Coast Region 1983 Storm Report, Los Angeles County, February 26 - March 6, 1983 AUTHOR(S): Los Angeles County Flood Control District SOURCE: Los Angeles County Flood Control District, Los Angeles, California, 41+ pp. DATE: 06/01/83 ABSTRACT: An account of the 1983 storms in Los Angeles County cut off deries of storms were able to penetrate because low off coast caused split flow in jet stream. Includes data, and a storm damage report. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics storms/floods, precipitation, river discharge California, South Coast Region, Subregion VIII, Subregion IX Beach Improvement and Erosion Control Report: Las Tunas Beach, Corral Beach. and Westward Beach AUTHOR(S): Los Angeles County, Dept. of County Engr. SOURCE: Dept. of County Engr., Design Division, County of Los Angeles, California, 40+ pp. DATE: 08/01/65 ABSTRACT: Three beaches along the northern Los Angeles County coast have been studied as to the possibility of widening them to give better beach access, and provide recreation areas, parking etc. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, growth potential/recreation, coastal erosion California, South Coast Region, Subregion VIII, Santa Monica Cell Sealing of Mission Bay Jetties, San Diego, California AUTHOR(S): Loudon, R. E. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Bulletin No. 14 DATE: 07/01/60 ABSTRACT: Grouting of the north jetty to make it impermeable to the passage of sand through the jetty into the navigation channel is described and illustrated with a number of photographs. Materials selected for the grout mixture, details of the equipment, placement operations, and costs are discussed. KEYWORDS: Coastal Processes coastal structures, littoral sediment, longshore transport California, San Diego Region, Subregion X, Mission Bay Cell Rainfall and Stream Runoff in Southern California Since 1769 AUTHOR(S): Lynch, H. B. SOURCE: Metropolitan Water District of Southern California, Los Angeles,

California, 31 pp. DATE: 08/01/31 ABSTRACT: Uses memoirs, diaries, Spanish mission harvest records, mission annual reports and historical documents since 1769 up to start of rainfall recordings. Also discusses California storm patterns KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics climatology, precipitation California, South Central Region, South Coast Region, San Diego Region Santa Ana River Investigation AUTHOR(S): MacRostie, W.; Dolcini, A. J. SOURCE: Bulletin No. 15, State of California, Department of Water Resources, Division of Resources Planning, Sacramento, California, 228+ pp. DATE: 02/01/59 ABSTRACT: A summary of hydrologic conditions of the Santa Ana River Basin. Presents discussion of major floods (particularly 1938 flood) and watershed characteristics. Includes data. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, reservoirs, river discharge, urbanization, watersheds California, South Coast Region, Subregion IX, San Pedro Cell Wave Data Meeting, Memorandum for the Record AUTHOR(S): Magoon, O. T.; Edminsten, J. R. SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 237 pp. DATE: 11/23/77 ABSTRACT: This report is an extension of the Proceedings of the International Symposium on Ocean Wave Measurements and Analysis, B. L. Edge, O. T. Magoon, Eds., ASCE, 1974, Vol. 1, 2, and provides interim standards for measurement and recording of ocean waves to be used in the proposed California Coastal Data Collection program. KEYWORDS: Coastal Processes wave climate, wave transformation California The Coastal Wetlands of Northern Santa Barbara County AUTHOR(S): Mahrdt, C. R.; Oberbauer, T.; et al. SOURCE: Coastal Wetlands Series No. 14, State of California, Department of Fish and Game, Sacramento, California, 99+ pp. DATE: 05/01/76 ABSTRACT: Hydrologic characterization of nothern Santa Barbara County, including Shuman Creek, San Antonio Lagoon, Santa Ynez Lagoon Canada Honda Creek, and Jamala Creek. Presents a historical perspective, and drainage and hydrologic characteristics. Includes.

KEYWORDS: Hydrology & Hydraulics estuarine sediment storage, river discharge, shoreline use, environmental constraints California, South Central Region, Subregion VI, S. Monterey Bay Cell Hydrographic Data from Newport Bay AUTHOR(S): Maloney, N. J. SOURCE: Dept. of Earth Sciences, California State University, Fullerton California DATE: 01/01/74 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Survey hydrographic surveys California, South Coast Region, Subregion IX, San Pedro Cell Nearshore Sedimentation, Laguna Beach, California AUTHOR(S): Maloney, N. J. SOURCE: EOS, American Geophysics Union, Vol. 63, No. 3, p. 64 DATE: 01/19/82 ABSTRACT: The types of sediments and the possible source areas for beach sand at Laguna and Aliso Beaches are mentioned. KEYWORDS: Geomorphology, Coastal Processes beaches, littoral sediment, sedimentation California, South Coast Region, Subregion IX, S. San Pedro Reach Holocene Sedimentation in Santa Monica Basin, California AUTHOR(S): Malouta, D. N. SOURCE: M. S. Thesis, University of Southern California, Los Angeles, California, 146 pp. DATE: 01/01/78 ABSTRACT: This report is about Holocene sedimentation and the sources of sedimentation in Santa Monica Basin. The sediments are derived largely from the Santa Clara and Ventura Rivers and are trans- ported across the shelf to submarine canyons. KEYWORDS: Geomorphology, Coastal Processes geology, grain size, littoral sediment, maps, sedimentation, submarine canvons California, South Coast Region, Subregion VIII, Santa Monica Cell The Sediments of Lake Elsinore, Riverside County, California AUTHOR(S): Mann, J. F. SOURCE: Journal of Sediment Petrology, Vol. 21, No. 3, pp. 151-161 DATE: 09/01/51 ABSTRACT: About one hundred samples of beach and bottom sediments of Lake Elsinore were taken. Histograms of grain size frequency were developed and six distinct types of sediments were recognized. KEYWORDS: Geomorphology geology, petrology, river-bed sediment, sand entrapment, sedimentation California, South Coast Region, Subregion IX Wetland Regulation in California: A Review

AUTHOR(S): Marcus, M. L.; Dennis, N. B.; Hill, H. L.

SOURCE: Coastal Zone '83, Symposium, San Diego, California, June 1-4, 1983; ASCE, N. Y., Vol. III, pp. 2725-2738 DATE: 01/01/83 ABSTRACT: Examines the history of wetland distribution and use throughout California focussing on current trends and issues in wetland development and conservation. Also discusses the State and federal agencies and programs which govern wetlands. Includes an evaluation of the U.S. Army Corps of Engineers 404 program. KEYWORDS: Coastal Processes environmental constraints, institutions/planning/mgmt., shoreline use California Design Waves for Proposed Small Craft Harbor at Oceanside, California AUTHOR(S): Marine Advisors For: U. S. Army Corps of Engineers, Los Angeles District; SOURCE: Marine Advisors, Inc., La Jolla, California DATE: 01/01/60 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal structures, wave transformation, wave climate California, San Diego Region, Subregion X, Oceanside Cell Design Waves for a Proposed Small Craft Harbor at Dana Point, California AUTHOR(S): Marine Advisors SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District; Marine Advisors, Inc., La Jolla, California, 20 pp. DATE: 03/15/60 ABSTRACT: Evaluation of characteristics of severest waves at Dana Cove as a basis for design of small craft harbor protective works. Wave and storm history 1900-1959 data reviewed. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation, coastal structures, storms/floods, storm waves California, San Diego Region, Subregion X, San Pedro Cell, S. San Pedro Reach, Oceanside Cell A Statistical Survey of Ocean Wave Characteristics in Southern California Waters AUTHOR(S): Marine Advisors SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District; Marine Advisors, Inc., La Jolla, California, 30 pp. DATE: 01/01/61 ABSTRACT: Development of statistics which present a detailed analysis by

direction, height, and period of the frequency of occurrence of various types of ocean waves characteristic of Southern California waters. Forecasts were made for three locations near San Clemente Island, Newport Beach, and Encinitas. Significant wave height and period are presented. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, South Coast Region, San Diego Region, Subregion IX, Subregion X, San Pedro Cell, Oceanside Cell Design Wave for Proposed Small Craft Harbor at Dana Point, California, Appendix 1 - Refraction Diagrams AUTHOR(S): Marine Advisors SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District; January 20, 1960, Marine Advisors, Inc., La Jolla, California, 27 pp. DATE: 01/01/61 The entire report is composed of 25 wave refraction diagrams. ABSTRACT: KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal structures, wave climate, wave transformation California, South Coast Region, Subregion IX, Oceanside Cell A Study of Sea-Swell and Seiches in Mission Bay AUTHOR(S): Marine Advisors SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District; Marine Advisors, Inc., La Jolla, California, 24 pp. DATE: 09/01/61 ABSTRACT: Measurement of wave action during the first four months of 1961. All significant surges and waves are discussed; most intense wave activity was recorded during February 9-10, 1960. Information was obtained for analytical treatment of the surge/seiche problem. KEYWORDS: Coastal Processes coastal structures, storm surge, wave climate, wave transformation California, San Diego Region, Subregion X, Mission Bay Cell Wave Study at Mission Bay, California AUTHOR(S): Marine Advisors SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District; Marine Advisors, Inc., La Jolla, California, 15 pp. DATE: 09/01/63 ABSTRACT: A series of wave transducers was installed in Mission Bay to supply information on wave action. Data were telemetered to recording center in Та Jolla. Extreme cases of wave activity were chosen from approximately four months of data and then subjected to spectral analysis. Includes data. KEYWORDS: Coastal Processes

wave climate, wave transformation, coastal structures, storm surge California, San Diego Region, Subregion X, Mission Bay Cell Summary Report of San Onofre Oceanographic Surveys - July, 1963 to December, 1968 AUTHOR(S): Marine Advisors SOURCE: For: Southern California Edison Company, Los Angeles; Marine Advisors, Inc., La Jolla, California, 168 pp. DATE: 05/01/69 ABSTRACT: Oceanographic monitoring program in coastal waters off San Onofre Nuclear Power Plant site. Objectives of the program were to qualitatively and quantitatively describe the ocean environ- ment prior to plant operation, and to evaluate any effect to the marine biological community caused by future thermal addition by plant operation. Beach profiles, currents, drogue tracks, suspended sediment, sediment distributional data are shown in figures. KEYWORDS: Coastal Processes coastal structures, environmental constraints, beach profiles, littoral sediment, longshore current, California, San Diego Region, Subregion X, Oceanside Cell Breakwater Stability Study, Imperial Beach, California AUTHOR(S): Markle, D. G.; Carver, R. D. SOURCE: Final Report, U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report H-77-22, 138 pp. DATE: 12/01/77 ABSTRACT: A hydraulic model investigation was conducted at a geometrically undistorted scale of 1:16, model to prototype, to design stable rubblemound breakwater sections to protect a beach nourishment area at Imperial Beach, California. Both the -5.0 ft. mllw contour (shallow-water location) and -10.0ft. mllw contour (deeper water location) were given as proposed construction sites. Twenty-one plans were tested. KEYWORDS: Coastal Processes, Hydrology & Hydraulics beach nourishment/dredging, coastal structures, overwash California, San Diego Region, Subregion X, Breakwater Stability Study, Mission Bay, California AUTHOR(S): Markle, D. G. SOURCE: Final Report, Hydraulic Model Investigation, U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WESTRHL-83-18, 26 pp. DATE: 09/01/83 ABSTRACT: Design alternatives based on model conditions of proposed offshore, random-placed armor-stone breakwater design. Includes data.

KEYWORDS: Coastal Processes coastal structures, hydrographic surveys California, San Diego Region, Subregion X Large Storm-Induced Sediment Slump Reopens An Unknown Scripps Submarine Canyon Tributary AUTHOR(S): Marshall, N. F. SOURCE: In: Sedimentation in Submarine Canyons, Fans, and Trenches, D. L. Stanley and G. Kelling, Eds., Dowden, Hutchinson & Ross, Straudsberg, Penna., pp. 73-84 DATE: 01/01/78 ABSTRACT: not reviewed KEYWORDS: Coastal Processes geomorphic processes, submarine canyons California, San Diego Region, Subregion X, Oceanside Cell Wave Direction Measured by Four Different Systems AUTHOR(S): Mattie, M. G.; Hsiao, S. V.; Evans, D. D. U. S. Army Corps of Engineers, Coastal Engineering Research SOURCE: Center, Vicksburg, Miss., CERC Reprint 81-5; and IEEE Journal of Oceanic Engrg., Vol. OE-6, No. 3, July 1981, pp. 87-93 DATE: 07/01/81 ABSTRACT: Four systems were used to obtain wave-direction information offshore of Mission Beach, California: a synthetic aperture radar (SAR) aboard a NASA aircraft; a coastal imaging radar; a pressure-gage array offshore; and aerial photography aboard two aircraft. The coastal radar, aerial photography and SAR provided wave images; direction and length of principal wave and twodimensional wave spectra were then determined. The array provided directional wave spectra. scatter diagrams which intracompare measurements from these four systems, and radar image spectral information. KEYWORDS: Coastal Processes aerial photography, remote sensing, wave climate, wave transformation California, San Diego Region, Subregion X, Mission Bay Cell Blufftop Regulatory Setbacks - A Regulatory Impossibility? AUTHOR(S): McCarthy, R.; Tobin, L. SOURCE: Coastal Zone '83, Symposium, San Diego, California, Vol. II, June 1-4, 1983; ASCE, N. Y., pp. 1600-1604 DATE: 01/01/83 ABSTRACT: In order to prevent future erosion problems and property losses, the California Coastal Commission requires geotechnical reports and setback lines in areas of blufftop instability. This report discusses the policy as an

inexpensive, non- structural approach to preventing losses due to erosion. Unfortunately, this policy has met political resistance and is therefore difficult to enforce fairly and with consistency. KEYWORDS: Coastal Processes institutions/planning/mgmt. California Innovative Estuarine Restoration and Management AUTHOR(S): McCreary, S.; Zentner, J. SOURCE: Coastal Zone '83, Symposium, San Diego, California, June 1-4, 1983; ASCE, N. Y., Vol. III, pp. 2527-2549 DATE: 01/01/83 ABSTRACT: This paper traces the rationale for restoration and management of estuaries and coastal wetlands in California, illustrates several trends in the field, discusses how state agencies address wetland protection, and examines two projects involving conflict resolution. Two other projects are also addressed. KEYWORDS: Coastal Processes environmental constraints, institutions/planning/mgmt. California, San Diego Region, Subregion X, Oceanside Cell, Silver Strand Cell Marine Terrace Deformation, San Diego County, California AUTHOR(S): McCrory, P. A.; La Joie, K. R. SOURCE: Tectonophysics, Vol. 52, pp. 407-408 DATE: 01/01/79 ABSTRACT: Marine terraces on Soledad Mount and Point Loma were analysed to record local differential uplift during middle to late Pleistocene time on the southwest side of the Rose Canyon Fault near San Diego. KEYWORDS: Geomorphology neotectonics California, San Diego Region, Subregion X, Oceanside Cell Water Motion and Sediments of Northeast San Pedro Bay, California AUTHOR(S): McCurdy, R. SOURCE: Master's Thesis, University of Southern California, Los Angeles, California, 79 pp. DATE: 01/01/64 ABSTRACT: not reviewed KEYWORDS: Coastal Processes littoral sediment, sedimentation, nearshore currents California, South Coast Region, Subregion IX, San Pedro Cell Climatic Features as a Fire Determinant AUTHOR(S): McCutchan, M. H. SOURCE: General Tech. Report WO-3, U. S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station, Berkeley, California

DATE: 08/01/77 ABSTRACT: Presents measurements of weather before and during fires. Gives indicators of fire weather, and fire danger. Discusses impor- tance linking weather and climate to fire-flood sequences. Uses world wide Mediterranean type climate data including California. Relates fires to Santa Ana winds in Southern California and relates fire weather in Southern California to subtropical hiqh persisting over the western United States. KEYWORDS: Oceanography & Meteorology fires California, South Central Region, South Coast Region, San Diego Region Ocean Temperatures and Seasonal Rainfall in Southern California AUTHOR(S): McEwen, G. F. SOURCE: Monthly Weather Review, Vol. 53, No. 11, pp. 483-489 DATE: 11/01/25 ABSTRACT: This report examines rainfall data in San Diego and correlates the data with surface water temperature measured at Scripps Pier and finds a reasonable correlation. Discusses relationship to winds and pressures over the Pacific. Includes data. KEYWORDS: Oceanography & Meteorology climatology, precipitation California, San Diego Region, Subregion X Water Resources of California, Part III, Stream Measurements in the Great Basin and Pacific Coast River Basins AUTHOR(S): McGlashan, H. D.; Dean, H. J. SOURCE: Water-Supply Paper 300, U. S. Geological Survey, Washington, D. С., 956 pp. DATE: 01/01/13 ABSTRACT: Gives descriptions of major river basins and gives hydrologic data for Tijuana River, Sweetwater River, San Diego River, San Dieguito River, San Luis Rey River, Santa Margarita River, Santa Ana River and Santa Ana Basin tributaries, San Gabriel River, Los Angeles River, Malibu Creek, Santa Clara River, Ventura River, San Roqui Creek, San Jose Creek, Loma Abajo River, Santa Ynez River, and Santa Maria River. Includes data. KEYWORDS: Hydrology & Hydraulics river discharge California, South Central Region, Southern California Floods of January 1916 AUTHOR(S): McGlashan, H. D.; Ebert, F. C. SOURCE: Water-Supply Paper 426, U. S. Geological Survey, Washington, D. C., 80

pp. DATE: 01/01/18 ABSTRACT: Account of the 1916 floods (devastating in part due to dam failures in San Diego County). Concentrates on San Diego County, although data on the Los Angeles River and San Gabriel River are included. Also included are the Santa Ana River Basin and Santa Clara River Basin, and major watersheds of San Diego Region. Gives daily maximum and minimum discharges of the major rivers, and an overview, but not many details of precipitation measurements. KEYWORDS: Hydrology & Hydraulics precipitation, reservoirs, river discharge, storms/floods California, South Coast Region, Geologic Map Index of California AUTHOR(S): McIntosh, W. L.; Eister, M. F. SOURCE: U. S. Department of Interior, Geological Survey, Washington, D. C., 16 pp. DATE: 01/01/78 ABSTRACT: Sixteen maps are indexed on a large scale map of the State along with a citation as to publisher and scale. KEYWORDS: Geomorphology, Coastal Processes, Oceanography & Meteorology, Survey beaches, cliff sediment, geology, geomorphic processes, grain size, maps California, South Central Region, South Coast Region, San Diego Region Use of Vibratory Coring Samplers for Sediment Surveys AUTHOR(S): Meisburger, E. P.; Williams, S. J. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC CETA 81-9 DATE: 07/01/81 Information on development and use of pneumatic vibratory ABSTRACT: coring apparatus and on analyses of cores used by CERC over last 18 years to assess offshore sand and gravel resources. More than 1600 cores collected in 15 surveys along Atlantic, Gulf, and Pacific Coasts. KEYWORDS: Coastal Processes, Geomorphology geology, sedimentation, littoral sediment, mining, beach nourishment/dredging California, Oregon, Mexico Mean Monthly Wind Data for California AUTHOR(S): Merritt, M.; Goodridge, J. D. SOURCE: California Department of Water Resource, Preliminary Unpublished Report, Sacramento, California DATE: 05/01/83 ABSTRACT: A preliminary report for new wind power atlas for the California

Energy Commission. Presents data tables (with station index) for wind data in California. Gives month, year, and average wind speed. KEYWORDS: Oceanography & Meteorology wind California Deep Water Wave Statisitics for the California Coast AUTHOR(S): Meteorology International, Inc. SOURCE: California State Department of Navigation and Ocean Development, Sacramento, California, 6 Volumes. DATE: 01/01/77 ABSTRACT: Presents hindcast data from 1946 to 1977 on wind, sea, swell, and wave heights. Discusses storm types and presents monthly and seasonal data in wave roses and bargraphs. KEYWORDS: Oceanography & Meteorology storms/floods, wave climate, wind California Deep-Water Wave Statistics for the California Coast, Stations 1-6 AUTHOR(S): Meteorology Intl., Inc. SOURCE: Department of Navigation and Ocean Development, State of California Resources Agency, Sacramento, California; Six Volumes, Each Station Report is 200+ pp. DATE: 01/01/77 ABSTRACT: Wave climate statistics derived from 29 years of wave hindcasting provide historical data on deep-water height, period, and direction, for the California coast. Stations 4, 5, and 6 are for Southern California. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Proposed Public Recreation Pier AUTHOR(S): Michael Brandman Assoc. Draft EIR - CEIR 84-4, For: City of Carpinteria, Michael SOURCE: Brandman Associates, Inc., Costa Mesa, California, 124 pp. DATE: 03/01/85 Report was prepared for the proposed development of a public ABSTRACT: recreational pier at one of three sites. The Environmental Impact Report evaluates the sites and the alternatives. Includes some data. KEYWORDS: Coastal Processes environmental constraints, shoreline use, beaches, institutions/planning/mgmt., geology, coastal structures California, South Central Region, Subregion VII, Santa Barbara Cell The Dynamics of the Littoral Zone AUTHOR(S): Miller, C. D.; Barcilon, A.

SOURCE: Reviews of Geophysics and Space Physics, Vol. 14, No. 1, pp. 81-91 DATE: 02/01/76 ABSTRACT: Field studies employing the observational approach to coastal dynamics laid the foundation for experimental and mathematical modeling. In the laboratory, wave tanks were used to record the interaction between waves and bottoms composed of loose sediment. Flow visualization techniques were used to track the resultant flow fields and particle movements. The concept of radiation stress was used to reproduce observed dynamic features. KEYWORDS: Coastal Processes wave climate, wave transformation, longshore transport, offshore/onshore transport California Long-Period Waves Over California Continental Borderland, Part II: Tsunamis AUTHOR(S): Miller, G. R.; Munk, W. H.; Snodgrass, F. E. SOURCE: Journal of Marine Research, Vol. 20, pp. 31-41 DATE: 01/01/62 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis, wave climate, wave transformation California Classification of Sand and Gravel Resource Areas, Orange County-Temescal Valley Production-Consumption Region AUTHOR(S): Miller, R. V.; Corbaley, R. Special Report 143, California Division of Mines and Geology, SOURCE: Sacramento, California, 20 pp. DATE: 01/01/81 ABSTRACT: Geographic zones where sand and gravel materials can be mined are shown on several topographic quadrangle map sheets. KEYWORDS: Geomorphology geology, maps, mining California, South Coast Region, Subregion IX, Oceanside Cell Clast Populations in the Sespe and Poway Conglomerates and Their Possible Bearing on the Tectonics of the Southern California Borderland AUTHOR(S): Minch, J. A.; Gibson, K. N.; Peterson, G. L. SOURCE: In: Aspects of Geol. History of the Cont. Brdrld, D. G. Howell, Ed., Misc. Pub. 24, Pac. Section, Amer. Assoc. of Pet. Geol., Bakersfield, Calif., pp. 256-325 DATE: 01/01/76 ABSTRACT: This report is about pronounced and diagnostic differences in the clast populations of Poway and Sespe type conglomerates of Southern California. KEYWORDS: Geomorphology geology, petrology, watershed sediment

California, San Diego Region, Subregion X, Oceanside Cell GIRAS: A Geographic Information Retrieval and Analysis System for Handling Land Use and Cover Data AUTHOR(S): Mitchell, W. B.; et al. SOURCE: Professional Paper No. 1059, U. S. Dept. of Interior, Geological Survey, Reston, Virginia, 16 pp. DATE: 01/01/77 ABSTRACT: This report describes the GIRAS land use and land cover maps and associated overlay (e.g., political units) for the U.S. The data will be available to the public in both graphic and digital form, and statistics derived from the data will be published. Current system development is focused upon an inter- active data base to enable immediate retrieval and display of map information. KEYWORDS: Geomorphology maps, population, shoreline use California, South Central Region, South Coast Region, San Diego Region The Santa Monica Causeway Project, Feasibility Study AUTHOR(S): Moffatt & Nichol SOURCE: Moffatt & Nichol, Engineers, Long Beach, California, 48 pp. DATE: 11/01/64 ABSTRACT: Proposed development of an off-shore causeway and beach. Report describes the desired project, gives costs, evaluates benefits and recommends course of action. Includes data. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt. California, South Coast Region, Subregion VIII, Santa Monica Cell Tide and Current Survey in a Portion of the Huntington Harbor Waterway System, May 4-17, 1973 AUTHOR(S): Moffatt & Nichol SOURCE: Moffatt & Nichol, Engineers, Long Beach, California DATE: 01/01/73 ABSTRACT: not reviewed KEYWORDS: Coastal Processes nearshore currents, tides California, South Coast Region, Subregion IX, San Pedro Cell Feasibility Study for An Artificial Surf Site at Oceanside, San Diego County, California AUTHOR(S): Moffatt & Nichol For: U. S. Army Corps of Engineers, Los Angeles District; SOURCE: Moffatt & Nichol, Engineers, Long Beach, California, 59 pp. DATE: 07/01/81 ABSTRACT: Investigation of the feasibility to modify shore protection structures or construct a reef to create new surfing sites.

KEYWORDS: Coastal Processes beach profiles, coastal structures, growth potential/recreation, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Low-Cost Shore Protection, Final Report on the Shoreline Erosion Control Demonstration Program AUTHOR(S): Moffatt & Nichol SOURCE: Moffatt & Nichol, Engineers, Long Beach, California, 835 pp. DATE: 08/01/81 ABSTRACT: The report documents the results of a program conducted by the U.S. Army Corps of Engineers to develop and demonstrate low-cost methods of shore protection in accordance with the provisions of Section 54, Public Law 93-251. Program objectives were to provide a data base for use in the logical selection of devices or combination of devices to protect inland or sheltered shorelines in any region of the U.S., and to develop techniques for making such a selection. KEYWORDS: Coastal Processes coastal erosion, coastal structures, institutions/planning/mgmt., shore protection California Experimental Sand Bypass System At Oceanside Harbor, California, Phase 1 Report: Data Collection and Analysis AUTHOR(S): Moffatt & Nichol SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District; Moffatt & Nichol, Engineers, Long Beach, California, 100+ pp. DATE: 01/01/83 ABSTRACT: Documents the results of the data collection and analyzes the design study for an experimental sand-bypass system to reduce periodic maintenance dredging costs. KEYWORDS: Coastal Processes beach nourishment/dredging, beach profiles, coastal structures, longshore transport, sand entrapment, wave climate California, San Diego Region, Subregion X, Oceanside Cell Experimental Sand Bypass System at Oceanside Harbor, California Phase 2: Hydraulic Calculations and Drive System Selection AUTHOR(S): Moffatt & Nichol SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District, California; Moffatt & Nichol, Engineers, Long Beach, California, 200+ pp. DATE: 06/01/83 ABSTRACT: This second report of a four-phase design study leads to preparation of plans and specifications for an experimental sand bypass system. The report

presents calculations of the hydraulic systems and selects the primemover drive units. This is a supplement to the Phase 1 report. Includes data. KEYWORDS: Coastal Processes coastal structures California, San Diego Region, Subregion X, Oceanside Cell Experimental Sand Bypass System at Oceanside Harbor, California, Phase 3 Report: Final Concept Draft AUTHOR(S): Moffatt & Nichol SOURCE: Draft Report For: U. S. Army Corps of Engineers, Los Angeles District; Moffatt & Nichol, Engineers, Long Beach, California, 250+ pp. DATE: 11/01/83 ABSTRACT: Presentation of the final concept plan for an experimental sand bypass system. KEYWORDS: Coastal Processes littoral sediment, coastal structures, beach nourishment/dredging, longshore transport California, San Diego Region, Subregion X, Oceanside Cell Experimental Sand Bypass System at Oceanside Harbor, California, Phase 3: Final Concept AUTHOR(S): Moffatt & Nichol SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District, California; Moffatt & Nichol, Engineers, Long Beach, California, 200+ pp. DATE: 08/01/84 ABSTRACT: This phase 3 presents a final concept plan for the experimental sand bypass system at Oceanside. A plan is selected, designed, and costed. Includes data. KEYWORDS: Coastal Processes beach profiles, coastal structures, institutions/planning/mgmt., longshore transport, wave transformation California, San Diego Region, Subregion X, Oceanside Cell An Economic Appraisal of Mining Offshore Sand and Gravel Deposits AUTHOR(S): Mokhtari-Soghafi, M.; Osborne, R. H. SOURCE: Technical Report Series, TR-80-01, Institute for Marine and Coastal Studies, University of Southern California, Los Angeles, California, 46 qα. DATE: 01/01/80 ABSTRACT: Available sedimentologic information and current market conditions were analysed and suggest that beach restoration and nourishment are the best uses for the offshore sand deposits along the inner Santa Monica Shelf. Future market conditions as well as changing social and environmental attitudes mav raise the profitability of offshore mining for concrete aggregate.

KEYWORDS: Geomorphology, Socioeconomics beach nourishment/dredging, geology, mining, growth potential/recreation California, South Coast Region, Determination of Average Geostrophic Current Velocities From Temp. and Spatially Random Hydrographic Data w/ Application to Southern Calif. Bight AUTHOR(S): Mooney, K. A. SOURCE: Tech. Report No. CGOO-TR-82-1, U. S. Coast Guard, Oceanographic Unit, Washington, D. C., 46 pp. DATE: 01/01/82 ABSTRACT: A method employing two-dimensional spline fits of spatially and temporally random hydrographic data is developed in order to be able to determine seasonally averaged geostrophic currents. The method is used in an analysis of the currents in the Southern California Bight. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, hydrographic surveys California, South Central Region, South Coast Region, San Diego Region Pacific Area Current Charts AUTHOR(S): Mooney, K. A.; Summy, A. D. Report No. TR-82-2, U. S. Coast Guard, Oceanographic Unit, SOURCE: Washington, D. C., 71 pp. DATE: 01/01/82 ABSTRACT: A monthly mean sea current was calculated for the west coast of the United States and the Hawaiian Islands area on a spatial grid of 1 deg by 1 deg. These mean geostrophic velocities were computer generated from dynamic height data obtained from the National Oceanographic Data Center. A method employing two-dimensional spline fits of spatially and temporally random hydrographic data was developed to determine the monthly averaged geostrophic currents. KEYWORDS: Coastal Processes coastal currents, hydrographic surveys California, Oregon Recent Coastal Sediments, Double Point to Point San Pedro, California AUTHOR(S): Moore, D. B. SOURCE: Tech. Report HEL-2-14, Hydraulic Engineering Laboratory, University of California, Berkeley, California DATE: 06/01/65 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology sedimentation, littoral sediment California, South Coast Region, Subregion VIII, Subregion IX, S. Santa Monica Reach, San Pedro Cell

The Marine Geology of the San Pedro Shelf

AUTHOR(S): Moore, D. G. SOURCE: Journal of Sedimentary Petrology, Vol. 27, pp. 162-181 DATE: 01/01/54 ABSTRACT: Samples of unconsolidated sediments on the shelf are subdivided into six types according to their texture and color. Finest sediment is behind the breakwater inclosing the shoreward part of the area. Coarsest sediment is on the central shelf and is believed to be residual from Pleistocene conditions. Sediment sorting within the area correlates well with known currents. KEYWORDS: Geomorphology, Coastal Processes geology, geomorphic processes, littoral sediment, maps, longshore current, sedimentation California, South Coast Region, Subregion IX, San Pedro Cell Emergency Protection of Eroding Shores AUTHOR(S): Moore, J. T. SOURCE: Coastal Zone '78, Symposium, San Francisco, California, March 14-16, 1978; ASCE, N. Y., Vol. IV, pp. 2897-2910 DATE: 01/01/78 ABSTRACT: Briefly discusses erosion protection on an emergency basis and suggests contingency planning for future events. California storms of Januarv and February 1978 are used as examples. KEYWORDS: Coastal Processes shore protection, storms/floods, coastal erosion, coastal erosion problems California Geology of Parts of the Azusa and Mount Wilson Quadrangle, San Gabriel Mountains, Los Angeles County, California AUTHOR(S): Morton, D. M. Special Report 105, California Division of Mines and Geology, SOURCE: Sacramento, California, 21 pp. DATE: 01/01/73 ABSTRACT: The geology and geomorphology of a mapped area which lies in the south-central part of the San Gabriel Mountains and in the adjoining part of the Los Angeles Basin is discussed. KEYWORDS: Geomorphology geology, maps, mining, neotectonics California, South Coast Region, Subregion IX, San Pedro Cell The Natural Resources of San Dieguito and Batiquitos Lagoons AUTHOR(S): Mudie, P. J.; Browning, B. M.; Speth, J. W. Coastal Wetlands Series No. 12, State of California, Department SOURCE: of Fish and Game, Sacramento, 100+ pp. DATE: 03/01/76 ABSTRACT: This report contains some hydrologic and sediment data specifically

for the San Dieguito Lagoon and Batiquitos Lagoon, San Diego County. Gives a historical background and discusses changes due to urbanization KEYWORDS: Hydrology & Hydraulics river discharge, river sediment discharge, sedimentation, urbanization, watersheds, estuarine sediment storage California, San Diego Region, Subregion X, Oceanside Cell Pollen Evidence for Historic Sedimentation Rates in California Coastal Marshes AUTHOR(S): Mudie, P. J.; Byrne, R. SOURCE: Estuarine and Coastal Marine Sciences, Vol. 10, pp. 305-316 DATE: 01/01/80 ABSTRACT: The pollen of alien weeds and ornamentals is used to determine sedimentation rates in four California salt marshes. Rates of sedimentation are given. KEYWORDS: Geomorphology, Coastal Processes geology, maps, river-bed sediment, sedimentation, watershed sediment California, San Diego Region, Subregion X, Oceanside Cell Refraction of Ocean Waves: A Process Linking Underwater Topography to Beach Erosion AUTHOR(S): Munk, E. H.; Traylor, M. A. SOURCE: Journal of Geology, Vol. 55, No. 1, pp. 1-26 DATE: 01/01/47 ABSTRACT: This paper deals with refraction although, one section in particular deals with wave generation by storms in the Pacific which are of importance to the San Diego area. Discusses: winter storms from Gulf of Alaska 11-15 second period, 3 to 7 feet; winter cold fronts in coastal region 7-10 second period, 4 to 12 feet; summer North Pacific high, 6-9 second period, 2 to 5 feet; summer swell from Antarctic storms 13-20 second period, 3 to 5 feet; soring wind waves, locally generated. Does not discuss eastern pacific tropical storms. Includes charts of basic wind/wave phenomena. KEYWORDS: Oceanography & Meteorology, Coastal Processes wave climate, wave transformation California, San Diego Region, Subregion X Refraction of Ocean Waves, A Process Linking Underwater Topography to Beach Erosion AUTHOR(S): Munk, W. H.; Traylor, M. A. SOURCE: Journal of Geology, Vol. 55, No. 1 DATE: 01/01/47 ABSTRACT: not reviewed KEYWORDS: Coastal Processes wave transformation, wave climate California

Origin and Generation of Waves AUTHOR(S): Munk, W. H. SOURCE: SIO Reference Series 51-57, Wave Report No. 99, Scripps Institution of Oceanography, La Jolla, California, 4 pp. DATE: 12/15/51 ABSTRACT: Study of wave spectrum for evaluation of effect on engineering structures, predicting tides, and predicting wind waves and swell. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, San Diego Region, Subregion X Forecasting Ocean Waves AUTHOR(S): Munk, W. H.; Arthur, R. S. SIO Reference Series 52-19, Scripps Institution of SOURCE: Oceanography, La Jolla, California; Reprinted from Compendium of Meteorology, American Meteorological Society, Boston, Mass., pp. 1082-1089 DATE: 01/01/52 ABSTRACT: Development of relationships which make possible the forecasting of ocean waves from synoptic meteorological data. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Small Tsunami Waves Reaching California From the Japanese Earthquake of March 4, 1952 AUTHOR(S): Munk, W. H. SOURCE: Seismological Society of America Bulletin, Vol. 43, pp. 219-222 DATE: 01/01/53 not reviewed ABSTRACT: KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis, wave climate, wave transformation California Long Period Waves Over California's Continental Borderland AUTHOR(S): Munk, W. H. SOURCE: Journal of Marine Research, Vol. 20, No. 2, pp. 119-120 DATE: 01/01/62 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California Long Ocean Waves AUTHOR(S): Munk, W. H. SOURCE: In: The Sea, Ideas and Observations on Progress in the Study of the Seas, Vol. 1, Physical Oceanography, M. N. Hill, Gen'l. Ed., Interscience Publ., Div. John Wiley & Sons, N. Y., pp. 647-663 DATE: 01/01/62 ABSTRACT: Theory of long waves is described and examples given.

KEYWORDS: Coastal Processes, Oceanography & Meteorology tides, tsunamis, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Directional Recording of Swell From Distant Storms AUTHOR(S): Munk, W. H.; et al. SOURCE: In: Philosophical Transactions of the Royal Society of London, Series A, Mathematical and Physical Sciences, No. 1062, Vol. 55, pp. 505-584 DATE: 04/18/63 ABSTRACT: Measurement of distribution of wave energy with frequency and direction for several months and attempt to interpret the resulting field in terms of pertinent geophysical processes. The fluctuating pressure on the sea bottom was measured with a triangular array of sensitive transducers located 2 miles offshore from San Clemente Island, California at a depth of 100 meters. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Tides Offshore: Transition From California Coastal to Deep Sea Waters AUTHOR(S): Munk, W. H.; Snodgrass, F.; Weinbush, M. SOURCE: Geophys. Fluid Dyn., Vol. 1, Nos. 1, 2, pp. 161-236 DATE: 01/01/70 ABSTRACT: Tides along continents are typically several times the height of tides at mid-ocean islands. The report discusses measurements off California through the transition zone betwen coastal and deep-sea waters. KEYWORDS: Coastal Processes, Oceanography & Meteorology tides, wave climate, wave transformation California The Control of Floodwater in Southern California AUTHOR(S): Munn, E. N. SOURCE: Journal of Forestry, Vol. 17, No. 4, pp. 423-429 DATE: 01/01/19 ABSTRACT: Describes debris flow damage and explains the construction and function of check dams built in headwaters. Compares flow from Haines Canyon (with dams) to that of Santa Anita Canyon (without dams) for the storms of 1917. KEYWORDS: Hydrology & Hydraulics precipitation, storms/floods, watershed sediment California, South Central Region, South Coast Region, San Diego Region Chaparral Cover, Runoff and Erosion AUTHOR(S): Munn, E. N. SOURCE: Journal of Forestry, Vol. 18, No. 8, pp. 806-814 DATE: 01/01/20 ABSTRACT: Describes effects of fires of 1919 in terms of runoff, streamflow

and erosion. Found check dams filled to capacity, substantial soil losses in burned watersheds. KEYWORDS: Hydrology & Hydraulics fires, watershed sediment, river discharge California, South Coast Region, Subregion VIII, Subregion IX The Principal Hydrological Features of the Pacific Ocean AUTHOR(S): Muromtsev, A. M. SOURCE: Translated from Russian, National Science Foundation, Washington, D. C., 417 pp. DATE: 01/01/63 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, wave climate California Some Features of Tsunamis on the Pacific Coast of South and North America AUTHOR(S): Murty, T. S.; Wigen, S. O.; Chawla, R. SOURCE: Manuscript Rep. Ser. No. 36, Marine Science Directorate, Ottawa, Ontario, Canada, 37 pp. DATE: 01/01/75 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis, wave climate, wave transformation California, Oregon, Mexico Environmental Solutions to Beach Stabilization AUTHOR(S): Muslin, D. Coastal Zone '78, Symposium, San Francisco, California, March SOURCE: 14-16, 1978; ASCE, N. Y., Vol. II, pp. 745-761 DATE: 01/01/78 ABSTRACT: Analysis of beach erosion problem at Imperial Beach, including discussion of nearshore currents, physical characteristics, wave climate, and environmental solution to problems as proposed by Corps of Engineers, Los Angeles District project (DM No. 4, February 1978). KEYWORDS: Coastal Processes beaches, coastal erosion problems, coastal structures, environmental constraints, longshore current, wave climate California, San Diego Region, Subregion X, Silver Strand Cell Comprehensive Study of the Coast of California AUTHOR(S): Muslin, D. SOURCE: Shore & Beach, Vol. 52, No. 2, pp. 31-35 DATE: 04/01/84 ABSTRACT: Description of Coast of California Storm and Tidal Waves Study objectives. KEYWORDS: Coastal Processes institutions/planning/mgmt., coastal erosion problems, storm damage, storms/floods

California

An Approach to Sediment Yield - Estimation for Watersheds of Orange County AUTHOR(S): Nakasone, H. I.; Mostafa, H. G. SOURCE: In: Proc. of an Engineering Workshop on Urban Hydrology, California State University at Long Beach, Long Beach, ASCE, New Yrok, pp. 150-168 gg. DATE: 03/22/75 ABSTRACT: Provides detailed guidelines for predicting average annual sediment yield in a watershed. Applies study to the case of Los Troncos Canyon of the Irvine coastal area. Sediment and sand yields before and after development were estimated, and a sand budget for Crystal Cove could be made with the results. KEYWORDS: Hydrology & Hydraulics, Coastal Processes beach nourishment/dredging, urbanization, watershed sediment, river sediment discharge California, South Coast Region, Subregion IX, San Pedro Cell, S. San Pedro Reach The Great Pacific Anticyclone of Winter 1949-1950: A Case Study in the Evolution of Climatic Anomalies AUTHOR(S): Namias, J. SOURCE: Journal for Meteorology, Vol. 8, No. 4, pp. 251-261 DATE: 08/01/51 ABSTRACT: Used sea level and 700 mb charts with 5, 15 and 30 day means to examine weather patterns over the Pacific Ocean. Gives Pacific storm cvclone tracks; relates anticyclone anomalies to tempera- ture and precipitation anomalies in the United States, especial-ly coastal anomalies. Found that in longer averages, there is a coherence in weather patterns, and that a reqular evolution emerges as a vast warm anticyclone moves in a great arc from the southeast north Pacific to the Bering Sea. KEYWORDS: Oceanography & Meteorology climatology California Recent Seasonal Interactions Between North Pacific Waters and the Overlying Atmospheric Circulation AUTHOR(S): Namias, J. SOURCE: Journal of Geophysical Research, Vol. 64, No. 6, pp. 631-646 DATE: 06/01/59 ABSTRACT: Presents dicussion of anomalous warming of surface waters and abnormalities in atmospheric circulation. Suggests feed back between ocean and atmoshpere in creating climatic condi- tions. Includes data. KEYWORDS: Oceanography & Meteorology

climatology California Sea Level at Southern California - A Decadal Fluctuation AUTHOR(S): Namias, J.; Huang, J. C. SOURCE: Science, Vol. 177, No. 4046, pp. 351-353 DATE: 01/01/72 not reviewed ABSTRACT: KEYWORDS: Coastal Processes sea level change California, South Central Region, South Coast Region, San Diego Region Large Scale and Long-Term Fluctuations on Some Atmospheric and Oceanic Variables AUTHOR(S): Namias, J. SOURCE: In: The Changing Chemistry of the Oceans, Nobel Symposium 20, D. Dryssen and D. Jayner (Eds.), Almquist and Wiksell, Stokholm DATE: 01/01/72 ABSTRACT: A general discussion of climatic change with large scale phenomena. Gives examples of air-sea interactions producing climatic fluctuations. Uses sea-surface temperatures and patterns in climate. KEYWORDS: Oceanography & Meteorology climatology California Premonitory Signs of the 1978 Break in the West Coast Drought AUTHOR(S): Namias, J. SOURCE: Monthly Weather Review, Vol. 107, No. 12, pp. 1675-1681 DATE: 12/01/79 ABSTRACT: Discusses weather patterns and sea-surface temperature patterns which resulted in the 1975-1977 drought in California followed by the 1978 storms. Analysis focuses primarily on flow patterns and 700 mb deviations. Includes data. KEYWORDS: Oceanography & Meteorology climatology, precipitation, storms/floods California Meteorologic and Oceanographic Conditions for the Enhancement or Suppression of Winter Rains Over California AUTHOR(S): Namias, J. SOURCE: In: Storms, Floods and Debris Flows in Southern California and Arizona, 1978 and 1980; National Research Council and Cal Tech EQL, National Academy Press, Washington, D. C., pp. 25-42 DATE: 03/17/80 ABSTRACT: Describes coupled atomosphere-ocean systems which have led to excessive or deficient winter rains in California. In parti- cular, finds a relationship between anomalous sea-surface temperatures in the Northeast Pacific

Ocean and 700 mb levels. KEYWORDS: Oceanography & Meteorology climatology, precipitation, storms/floods California Late Quaternary Depositional Systems and Sea Level Change - Santa Monica and San Pedro Basins, California Continental Borderland AUTHOR(S): Nardin, T. R. SOURCE: American Association of Petroleum Geologists Bulletin, Vol. 67, No. 7, pp. 1104-1124 DATE: 01/01/83 ABSTRACT: A suite of seismic reflection data that provides different degrees of resolution and penetration was used to map the depo- sitional systems that have developed in Santa Monica and San Pedro Basins during the late Quaternary. KEYWORDS: Geomorphology geology, littoral sediment, maps, offshore/onshore transport, sedimentation, submarine canyons California, South Coast Region, Subregion VIII, Subregion IX Oceanography Study, Port San Luis, California AUTHOR(S): National Marine Consultants SOURCE: National Marine Consultants, Santa Barbara, California, 21 pp. DATE: 12/01/59 ABSTRACT: The report presents the results of an oceanographic analysis of wave criteria pertinent to the design of a small craft harbor at Port San Luis. Includes data. KEYWORDS: Coastal Processes coastal structures, wave climate, wave transformation California, South Central Region, Subregion VI, Morro Bay Cell Oceanographic Study, Santa Barbara, California AUTHOR(S): National Marine Consultants SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District; National Marine Consultants, Santa Barbara, California, 17 pp. DATE: 01/01/60 ABSTRACT: Presents the results of an oceanographic analysis of wave criteria pertinent to the design of a small craft harbor at Santa Barbara, California. The study consists of data on the characteristics of storm waves of the past, and analysis of refraction patterns of waves of various periods and direction. Includes data. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell

Oceanographic Study, Point Hueneme, California AUTHOR(S): National Marine Consultants SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District, 92NMC-CE 4(60); National Marine Consultants, Santa Barbara, California, 40 pp. DATE: 01/01/60 ABSTRACT: This report presents the results of a wave refraction study of a 20-mile sector of coast centered on Point Hueneme, California. Includes data KEYWORDS: Coastal Processes wave transformation, wave climate California, South Central Region, Subregion VII, Santa Barbara Cell Wave Statistics for Seven Deep Water Stations Along the California Coast AUTHOR(S): National Marine Consultants SOURCE: For: U. S. Army Corps of Engineers, Los Angeles and San Francisco Districts; National Marine Consultants, Santa Barbara, California DATE: 01/01/60 ABSTRACT: not reviewed KEYWORDS: Coastal Processes wave transformation, wave climate California Wave Statistics for Seven Deep Water Stations Along the California Coast AUTHOR(S): National Marine Consultants SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District, California; National Marine Consultants, Santa Barbara, California, 20+ pp. DATE: 12/01/60 ABSTRACT: Gives an analysis (using hindcast) of wave statistics along the California coast. Used 1956, 1957 and 1958 meteorological data, charts and records to compile wave statistics. Includes a general description of weather condition (pacific high, extratropical cyclones, tropical cyclones, and southern hemisphere extratropical cyclones) which result in waves on California coast. Includes other data. KEYWORDS: Oceanography & Meteorology, Coastal Processes climatology, storms/floods, storm waves California Oceanographic Study, San Nicolas Island, California AUTHOR(S): National Marine Consultants SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District; National Marine Consultants, Santa Barbara, California, 43 pp. DATE: 08/01/61 ABSTRACT: Study of oceanographic factors involved in either rehabilitating the existing Coast Guard Beach Harbor or establishing a more preferable harbor site.

Deep water and shallow water wave data, design site wave characteristics, and sand transport analysis for San Nicolas Island are included. KEYWORDS: Coastal Processes coastal structures, longshore transport, wave climate, wave transformation California, San Diego Region Measuring Ocean Waves AUTHOR(S): National Research Council, Marine Board SOURCE: Proceedings of a Symposium and Workshop on Wave-Measurement Technology, April 21-22, 1981, Washington, D. C.; National Academy Press, Washington, D. C., 248 pp. DATE: 01/01/82 ABSTRACT: Reviews state-of-the-art of leading technologies for measuring ocean waves preceded by setting out needs of users for wave data. KEYWORDS: Coastal Processes wave climate, wave transformation California Catalog of Tsunami Photographs AUTHOR(S): Nelson, J. B. SOURCE: Report No. KGRD-13, National Geophysical and Solar-Terrestrial Data Center, Boulder, Colorado, 58 pp. DATE: 10/01/80 ABSTRACT: Photographs of tsunami waves and resulting damage. They cover nine events occurring during the period 1946-75. KEYWORDS: Coastal Processes storm damage, tsunamis, wave climate California Hydrologic Analysis of The December 4, 1974 Storm in Orange County AUTHOR(S): Nestlinger, A. J. SOURCE: In: Proc. of Engineering Workshop on Urban Hydrology, ASCE, New York, California State University of Long Beach, Long Beach, California, pp. 87-94 DATE: 03/02/75 ABSTRACT: Presents an analysis of an "extremely severe rainstorm" in Orange County, California. Storm was unusual in that 10, 15 and 30 minute intensities were not extreme, but three hour intensity was of 100 year recurrence level. Also, less rainfall was recorded at higher elevations than in coastal areas. New maximum discharge levels were recorded in several channels. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, storms/floods, river discharge California, South Coast Region, Subregion IX Terbidite Sedimentology of the Upper Cretaceous Point Loma and Cabrillo Formations, San Diego, California

AUTHOR(S): Nilsen, T. H.; Abbott, P. L.

SOURCE: In: Geological Excursions in the Southern California Area, P. L. Abbott, Ed., Annual Meeting, San Diego Geological Society, San Diego, California, pp. 139-166 DATE: 01/01/77 ABSTRACT: This report describes Upper Cretaceous marine strata of the Rosario Group in the San Diego area. The facies define a deep- sea fan deposited by westward-flowing sediment gravity flows that transported sediments derived from batholithic and pre- batholithic metamorphic rocks of the Peninsular Ranges. KEYWORDS: Geomorphology cliff sediment, geology, maps, watershed sediment California, San Diego Region, Subregion X, S. Mission Bay Reach Progress Report - Sand Transport Analysis, Morro Bay AUTHOR(S): Noda, E. K. For: U. S. Army Engineer District, Los Angeles, Contract No. SOURCE: DACW09-75-C-0027, Unpublished Report; Tetra Tech Inc., Pasadena, California, Volume 1 DATE: 12/01/74 ABSTRACT: Calculates sediment balance for Morro Bay. Includes wind analysis, aeolian transport, wave climate, and creek sediment analysis of the Chorro and Los Osos watersheds. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology, Coastal Processes climatology, littoral sediment, watershed sediment, wind transport, river-bed sediment, river sediment discharge California, Subregion VI, Morro Bay Cell Lusardi Formation: A Post-Batholithic Cretaceous Conglomerate North of San Diego, California AUTHOR(S): Nordstrom, C. E. SOURCE: Geology Society of America Bulletin, Vol. 81, pp. 601-606 DATE: 02/01/70 ABSTRACT: Discussion of the Lusardi Formation, a previously undescribed Cretaceous conglomerate, discontinuously exposed over an area of 25 sq mi near Rancho Santa Fe, California. It is here recognized as a new stratigraphic unit in coastal sedimentary succession of the Peninsular Range Province. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes California, San Diego Region, Subregion X Beach and Cliff Erosion in San Diego County, California AUTHOR(S): Nordstrom, C. E.; Inman, D. L. SOURCE: In: Studies in the Geology and Geologic Hazards of the Greater

San

Diego Area, A. Ross and R. J. Dowlen, Eds., San Diego Association of Geologists, San Diego, California, pp. 125-131 DATE: 01/01/73 ABSTRACT: Possibility of serious beach erosion along Southern California Coast, specifically in San Diego County, and general beach erosion problems and causes in the area are discussed. Data on sand supply and transport. KEYWORDS: Coastal Processes, Geomorphology beaches, cliff sediment, coastal erosion, littoral sediment, longshore transport, river sediment discharge California, San Diego Region, Subregion X Sand Level Changes on Torrey Pines Beach, California AUTHOR(S): Nordstrom, C. E.; Inman, D. L. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Misc. Paper 11-75, 166 pp. DATE: 12/01/75 ABSTRACT: Profile and sediment data collected during a 23-month survey of beach and offshore sand level changes along a straight beach at Torrey Pines, California. Data showed seasonal changes in beach configuration related to changes in the wave regime. KEYWORDS: Coastal Processes beach profiles, littoral sediment, longshore transport, offshore/onshore transport, wave transformation California, San Diego Region, Subregion X, Oceanside Cell The Value of Coastal Dunes as a Form of Shore Protection in California, U. S. Α. AUTHOR(S): Nordstrom, K. F.; Psuty, N. P. Coastal Zone '83, Symposium, San Diego, California, June 1-4, SOURCE: 1983; ASCE, N. Y., Vol. I, pp. 873-885 DATE: 01/01/83 Assesses the potential for enhancing coastal foredunes as a ABSTRACT: form of protection of the California coastline. KEYWORDS: Coastal Processes dunes, shore protection California, South Central Region, South Coast Region, San Diego Region Deep-Sea Fan Valleys, Past and Present AUTHOR(S): Normark, W. R.; Piper, D. J. Geology Society of America Bulletin, Vol. 80, pp. 1859-1866 SOURCE: DATE: 01/01/69 ABSTRACT: The development of deep sea fan-valleys and the process leading to their eventual filling are studied through detailed compari- son of two contemporary fan valleys, the La Jolla and San Lucas fans, with one of Miocene Age now exposed on land.

KEYWORDS: Geomorphology cliff sediment, geology, geomorphic processes, sedimentation, submarine canyons California, San Diego Region, Subregion X Sediments and Growth Pattern of Navy Deep-Sea Fan, San Clemente Basin, California Borderland AUTHOR(S): Normark, W. R.; Piper, D. J. SOURCE: Journal of Geology, Vol. 80, pp. 198-223 DATE: 01/01/72 ABSTRACT: Sedimentation in the Navy Fan which is located in the San Clemente Basin is discussed. Since the beginning of the last glacial period, about 56,000 cubic meters of sediment have been deposited on the fan. KEYWORDS: Geomorphology, Coastal Processes sand entrapment, sedimentation, submarine canyons California, San Diego Region, Subregion X The Marine Geology of the San Nicolas Island Region, California AUTHOR(S): Norris, R. M. SIO Reference Series 51-40, Submarine Geology Report No. 21, SOURCE: Scripps Institution of Oceanography, La Jolla, California, 14 pp. DATE: 11/01/51 ABSTRACT: During this study, over 250 bottom samples were taken on a arid pattern surrounding the island. A continuous echo-sounding profile was made whenever the research vessel was under way. Shoreline processes, general island geology and nearshore currents, were observed at the island during several visits in 1950 and 1951. KEYWORDS: Coastal Processes, Geomorphology geology, hydrographic surveys, nearshore currents, littoral sediment California, San Diego Region Dams and Beach Sand Supply in Southern California AUTHOR(S): Norris, R. M. SOURCE: In: Papers in Marine Geology, Shepard Commemorative Volume, R. Ι. Miller, Ed., Macmillian & Co., N. Y., pp. 154-171 DATE: 01/01/64 ABSTRACT: The problem of long-term loss of beach sand supply to dams, flood control works, and settling basins is discussed. Some data. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics littoral sediment, reservoirs, river-bed sediment, river sediment discharge, watershed sediment California, South Central Region, South Coast Region, San Diego Region Dams and Beach-Sand Supply in Southern California AUTHOR(S): Norris, R. M. SOURCE: Papers in Marine Geology - Shepard Commemorative Volume, Chapter 9,

Macmillan and Company, New York, pp. 154-171 DATE: 01/01/64 ABSTRACT: Describes the effects dams have on supply of sediments to the littoral zone by riverine transport. KEYWORDS: Geomorphology, Coastal Processes beach nourishment/dredging, dunes, geology, geomorphic processes, littoral sediment, sedimentation California, South Central Region, South Coast Region, San Diego Region Dams and Beach-Sand Supply in Southern California AUTHOR(S): Norris, R. M. SOURCE: In: Marine Geology, R. L. Miller, editor, the Macmillan Company, New York, pp. 154-171 DATE: 01/01/64 ABSTRACT: Reviews sand supply by streams to Southern California beaches from Purisma Point to the Mexican Border. Discusses balance of sources and sinks of beach sand; discusses effects of human intervention on sand supply. Includes graphs indicating watersheds no longer supplying beach sand because of dams. Effects are strongest in San Diego Region. KEYWORDS: Hydrology & Hydraulics, Coastal Processes beach nourishment/dredging, cliff sediment, reservoirs, river sediment discharge California, South Central Region, South Coast Region, San Diego Region, Subregion VII, Subregion VIII, Subregion IX, Subregion X Sea Cliff Retreat Near Santa Barbara, California AUTHOR(S): Norris, R. M. SOURCE: Mineral Information Service, California Division of Mines and Geology, Sacramento, California, Vol. 21, No. 6, pp. 87-91 DATE: 06/01/68 ABSTRACT: A series of studies made during the last five years along 10 miles of coast west of Santa Barbara show appreciable rates of erosion at most points. Adequacy of supporting evidence varies somewhat from place to place but most of the rates recorded are considered reliable. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, cliff sediment, shoreline changes California, South Central Region, Subregion VII, Santa Barbara Cell Wave Refraction at Long Beach and Santa Barbara, California AUTHOR(S): O'Brien, M. P. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Bulletin Vol. 4, No. 1, 49 pp. DATE: 01/01/50 ABSTRACT: Wave refraction at Long Beach and Santa Barbara, California; а formula for the calculation of the tidal discharge through an inlet;

characteristics of measured wave action on the basis of the frequency distribution of wave length, wave height and steepness; wave tank progress photographs; and beach erosion literature. Also see companion paper: Horrer, 1950. KEYWORDS: Coastal Processes coastal erosion, tidal inlets, wave climate, wave transformation California, South Central Region, South Coast Region, Subregion VII, Subregion IX, Santa Barbara Cell, San Pedro Cell Geology and Mineral Deposits of San Fernando Quadrangle, Los Angeles County, California AUTHOR(S): Oakeshott, G. B. SOURCE: Bulletin 172, California Division of Mines and Geology, San Francisco, California, 139 pp. DATE: 01/01/58 ABSTRACT: San Fernando quadrangle includes approximately 245 square miles of the western end of the San Gabriel Mountains in Los Angeles County. Various rock, sand and gravel quarries are described. KEYWORDS: Geomorphology geology, maps, mining, watershed sediment California, South Coast Region, Subregion IX, San Pedro Cell Evaluation of Continental Shelf Sand Deposits in the Redondo Beach -Malaga Cove Areas, California, Final Report AUTHOR(S): Ocean Science and Engineering For: U. S. Army Corps of Engineers, Los Angeles District, SOURCE: California; Ocean Science and Engineering, Inc., Washington, D.C. and Long Beach, California, 12 pp. DATE: 02/25/66 Report of a program to determine the volume of unconsolidated ABSTRACT: sediment, suitable for beach replenishment from the shallow floor between Redondo Submarine Canyon and Malaga Cove off Redondo Beach. Altogether, 29 cores were collected in area of investigation. Description includes appropriate data on sediment, color, grain size, sorting and compaction. Maps and data in map pocket. KEYWORDS: Coastal Processes, Geomorphology petrology, geology, geomorphic processes, grain size, littoral sediment California, South Coast Region, Subregion VIII, Santa Monica Cell Water Level Changes Produced on the Pacific Coasts of the United States and Canada by the Alaskan Tsunami of 1964 - Final Report AUTHOR(S): Oceanographic Services SOURCE: Oceanographic Services, Inc., No. OSI-65-105, Santa Barbara, California, 18 pp.

DATE: 11/01/65 ABSTRACT: Geophysical data on water levels which occurred at various West Coast and Canadian locations after the March 28, 1964 Alaskan earthquake, are presented, as well as the unusual runup which occurred at Crescent City, California and Alberni, British Columbia. KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis, wave climate, wave transformation California, Oregon, Mexico Variable Sediment Flux and Beach Management, Ventura County, California AUTHOR(S): Orme, A. R.; Brown, A. J. SOURCE: Coastal Zone '83, Symposium, San Diego, California, June 1-4, 1983, Vol. III; ASCE, N. Y., pp. 2328-2342 DATE: 01/01/83 ABSTRACT: Physical change and human activity along the Ventura County coast illustrate the problems of beach management under variable sediment-flux conditions. Based on observations over 1972-1982 and other investigation, a more complex scenario of physical change than is normally accepted by local planners and developers is revealed. This paper discusses the threedimensional behavior of the shore zone at four locations, and draws inference concerning the nature of the nearshore sediment flux under variable energy conditions. KEYWORDS: Coastal Processes, Geomorphology beach profiles, geomorphic processes, California, South Coast Region, Subregion VII, Santa Barbara Cell Potential Sand and Gravel Responses in Santa Monica and San Pedro Bays, Southern California AUTHOR(S): Osborne, R. H.; et al. Reprinted from Proc. of Oceans, San Diego, California, Inst. SOURCE: for Marine and Coastal Studies, University of Southern California, Los Angeles, California, pp. 590-597 DATE: 09/01/79 ABSTRACT: Sand and gravel are primary resources used in many phases of construction and to maintain Southern California's beaches and harbors. Deposits of saleable-grade material are becoming depleted. Offshore sand and gravel deposits in Santa Monica and San Pedro Bays offer possible alternatives to mining land- based deposits for beach nourishment and construction materials. KEYWORDS: Coastal Processes, Geomorphology beach nourishment/dredging, geology, maps, mining California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, San Pedro Cell

Quaternary Stratigraphy and Depositional Environments, Santa Monica Bay, Southern California AUTHOR(S): Osborne, R. H.; Schrideman, R. C.; Nardin, T. R.; Harper, A. S. SOURCE: Technical Report Series, USC-SG-R-01-80, Institute for Marine and Coastal Studies, University of Southern California, Los Angeles, California, pp. 143-156 DATE: 01/01/80 ABSTRACT: High-resolution seismic-reflection profiles with 51 vibracores were used to analyze the Quaternary stratigraphy of the Santa Monica Shelf. KEYWORDS: Geomorphology, Coastal Processes geology, geomorphic processes, maps, grain size, neotectonics, petrology California, South Coast Region, Subregion VIII, Santa Monica Cell Geomorphic and Sedimentologic Analysis for the Oceanside Project AUTHOR(S): Osborne, R. H. Geotechnical Branch, U. S. Army Corps of Engineers, Los Angeles SOURCE: District, California, 81 pp. DATE: 01/01/82 ABSTRACT: A preliminary study of the texture and mineralogy of river and littoral zone sediments evaluates the potential sources of beach material for the Oceanside area. The data includes the percent passing sieves and abundance of selected minerals. Four petro- graphic facies are identified from beach sand samples collected up-and down-coast of Oceanside Harbor in December 1980. KEYWORDS: Geomorphology, Coastal Processes beaches, geology, geomorphic processes, littoral sediment, petrology, river-bed sediment California, San Diego Region, Subregion X, Oceanside Cell Report of Potential Offshore Sand and Gravel Resources of the Inner Continental Shelf of Southern California AUTHOR(S): Osborne, R. H.; Darigo, N. J.; Scheidemann, R. C. For: California State Department of Boating and Waterways, SOURCE: Sacramento, California; University of Southern California Dept. of Geological Services, Los Angeles, California, 302 pp. DATE: 06/01/83 ABSTRACT: Inventory of potential sand and gravel sources located within offshore coastal areas from Point Dume, Los Angeles County to the international boundary with Mexico. Locates and delineates deep sediment areas for future sand borrow sites to replace upland sites that are vanishing because of changing land use. Separate Appendix E volume includes map sets for areas 1-VIII of the report, and 27 plates.

KEYWORDS: Coastal Processes, Geomorphology beach nourishment/dredging, geology, grain size, mining, petrology, sedimentation California, South Coast Region, San Diego Region Oceanographic Data Report, San Clemente Island Area AUTHOR(S): Oser, R. K.; Berger, J. L.; Franc, L. J. SOURCE: Information Report IR No. 67-77, U. S. Navy, Naval Oceanographic Office, Washington, D. C., 152 pp. DATE: 09/01/67 The report presents sediment, deep towed profiler, physical ABSTRACT: oceanographic, visibility, and current data collected in the San Clemente Island Test Range from October to December 1966 aboard the USNS DAVIS (T-AGOR 5). Instrumentation development pertinent to the survey is also discussed. Conclusions reached in this report are tentative based on the limited amount of survey data available. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, hydrographic surveys, sedimentation California, San Diego Region, Subregion X Preliminary Landslide Investigation, Sea Cliff Property, El Camino de la Luz, Santa Barbara, California AUTHOR(S): Pacific Materials Lab. SOURCE: For: City of Santa Barbara; Pacific Materials Laboratory, Inc., Santa Barbara, California, 24 pp. DATE: 03/06/78 ABSTRACT: The study determined the cause and extent of failure, including adjacent areas of unstable rock; prepared appropriate geologic map and cross-sections to illustrate the nature of failure; made recommendations to mitigate effects of the current slide and to reduce potential future slides. KEYWORDS: Coastal Processes, Geomorphology coastal erosion problems, geology, geomorphic processes, cliff sediment California, South Central Region, Subregion VII, Santa Barbara Cell Geology and Ground-Water Appraisal of the Naval Air Missile Test Center Area, Point Mugu, California AUTHOR(S): Page, R. W. SOURCE: U. S. Dept. of Interior, Geological Survey, Water Supply Paper 1619-F, 35 pp. DATE: 01/01/63 ABSTRACT: Lithologic descriptions of water wells. KEYWORDS: Geomorphology geology, maps, river-bed sediment California, South Central Region, Subregion VI, Santa Ynez River Cell Erosion of Submarine Outcrops, La Jolla Submarine Canyon, California

AUTHOR(S): Palmer, H. D. SOURCE: Geological Society of America Bulletin, Vol. 87, No. 3, pp. 427-342 DATE: 01/01/76 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geomorphic processes, submarine canyons California, San Diego Region, Subregion X, Oceanside Cell Marine Terraces of California, Oregon and Washington AUTHOR(S): Palmer, L. A. SOURCE: Ph.D. Thesis, University of California at Los Angeles, California, 320 pp. DATE: 01/01/67 This study utilizes a longitudinal-profile orientation and ABSTRACT: regional scale to study deformation. The primary product of the study is a greatly extended longitudinal marine-terrace profile from Canada to Mexico which extends beyond known large-scale geologic provinces. KEYWORDS: Geomorphology cliff sediment, geomorphic processes, maps California, South Central Region, South Coast Region, San Diego Region Determination of Directional Spectra of Ocean Waves From Gage Arrays AUTHOR(S): Paniker, N. N. SOURCE: Hydraulic Engineering Lab., College of Engineering, University of California, Berkeley, California, 293 pp. DATE: 08/01/71 ABSTRACT: Development of a comprehensive and general procedure for determining distribution of wave energy with respect to frequency and direction, and its testing and application. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, Subregion VII The 1977-1978 Southern California Winter AUTHOR(S): Pappas, R. G. SOURCE: Mariners Weather Log, Vol. 22, No. 5, pp. 317-324 DATE: 09/01/78 ABSTRACT: Presents meteorological accounts of 1978 through 1979 storm season, including pressure maps and satellite photos. Major storms occured February 8-10 and February 28 through March 5 although there were a series of storms throughout the winter. KEYWORDS: Oceanography & Meteorology storms/floods California, South Central Region, South Coast Region, San Diego Region

Coastal Storms in Southern California

AUTHOR(S): Pappas, R. G. SOURCE: Mariners Weather Log, Vol. 24, No. 4, pp. 255-260 DATE: 09/01/80 ABSTRACT: A detailed meteorological account of February 1980 storms in Southern California. Includes meteorological conditions, surface pressure, and satellite photos. Major storms occured February 13 through 21, during which time six storms passed through the area. KEYWORDS: Oceanography & Meteorology storms/floods California, South Central Region, South Coast Region, San Diego Region Effects of Beach Replenishment on the Nearshore Sand Fauna at Imperial Beach, California AUTHOR(S): Parr, T.; Diener, D.; Lacy, S. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Misc. Report 78-4, 125 pp. DATE: 12/01/78 Changes in intertidal and shallow sub-tidal sand-bottom ABSTRACT: infaunal populations in response to approximately 765,000 cubic meters of dredged material pumped onto coastal exposed beach at Imperial Beach, California is evaluated. KEYWORDS: Coastal Processes beach nourishment/dredging, environmental constraints California, San Diego Region, Subregion X, Silver Strand Cell Seasonal Variation in Sea Level in the Pacific Ocean During the International Geophysical Year 1957-1958 AUTHOR(S): Pattulo, J. G. SOURCE: Journal of Marine Research, Vol. 18, pp. 168-184 DATE: 01/01/60 ABSTRACT: not reviewed KEYWORDS: Coastal Processes sea level change California, Oregon, Mexico Seasonal Variations of the California Current AUTHOR(S): Pavlova, V. V. SOURCE: Oceanology, Vol. 6, No. 6., pp. 806-814 DATE: 01/01/66 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents California Study of Wave Climate in Nearshore Waters AUTHOR(S): Pawka, S. S. SOURCE: In: Proceedings of International Symposium on Ocean Wave Measurements and Analysis, Vol. I, New Orleans, La., Sept. 9-11, 1974, ASCE, N. Y., pp.

745-760 DATE: 09/09/74 ABSTRACT: Investigation of the wave climate off Torrey Pines Beach, California. Offshore data inferred from shallow water measure- ments should be applicable to local problem areas such as Oceanside Harbor, Mission Bay entrance channel, and Sunset Cliffs. KEYWORDS: Coastal Processes longshore transport, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Wave Climate at Torrey Pines Beach, California AUTHOR(S): Pawka, S. S.; Inman, D. L.; Lowe, R. L.; Holmes, L. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Tech. Paper 76-5, 115 pp. DATE: 01/01/76 ABSTRACT: Study of wave climate at Torrey Pines Beach, California using a line array of four pressure sensors which paralleled the coast- line at a depth of 10 meters. Data from the array were used to calculate estimates of the frequency-directional spectra of the wave field. KEYWORDS: Coastal Processes wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Climate of Torrey Pines Beach, California AUTHOR(S): Pawka, S. S.; Inman, D. L.; Lowe, R. L.; Holmes, L. Scripps Institution of Oceanography, La Jolla, California SOURCE: DATE: 05/01/76 ABSTRACT: The wave climate at a site off Torrey Pines Beach was studied usina a line array of four pressure sensors which roughly parallels the coastline at a depth of 10 meters. The pressure sensors were linked to a shelf station that contained accelero- meters and, at times, electromagnetic current meters and a surface-piercing staff. The data were transmitted by radio link to a shore recording station. Wave records were taken four times daily from February 1973 to May 1974. The Shelf and Shore (SAS) system remained on station and operative during seven storms in the winter of 1974. KEYWORDS: Coastal Processes nearshore currents, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Comparison Between Wave Directional Spectra from SAR Pressure Sensor Arrays AUTHOR(S): Pawka, S. S.; Hsiao, S. V.; Shemdin, O. H.; Inman, D. L. SOURCE: Journal of Geophysical Research, Vol. 85, No. C9, pp. 4987-4995 DATE: 09/20/80

ABSTRACT: Simultaneous directional wave measurements were conducted at Torrey Pines, California in March 1977 during the West Coast Experiment. KEYWORDS: Coastal Processes wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Wave Directional Characteristics on a Partially Sheltered Coast AUTHOR(S): Pawka, S. S. SOURCE: Ph. D. Dissertation in Oceanography, Scripps Institution of Oceanography, La Jolla, California, 279 pp. DATE: 01/01/82 ABSTRACT: The sheltering effects of the Channel Islands on the windgenerated surface gravity wave field at the Southern California coastline are studied with an extensive field experiment. Emphasis is placed on wave directional measurements sampled at Torrey Pines Beach with a linear array of pressure sensors. Problems in the estimation of wave directional spectra and momentum flux are addressed and solutions are proposed. The statistical fluctuations of the wave momentum flux estimators are examined and compared to approximate analytic relationships. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, Coast of California Waves Study - Site Selection AUTHOR(S): Pawka, S. S.; Guza, R. T. SIO Reference Series No. 83-12, Scripps Institution of SOURCE: Oceanography, La Jolla, California, 51 pp. DATE: 01/01/83 ABSTRACT: The primary purpose of this report is to select sites for coastal wave measurements, as part of the Coast of California Storm and Tidal Waves Study, which cover the coastal wave climate and are appropriate for verification of wave transfor- mation models. A sheltering model is used. Field data is reviewed and shows this model to be adequate for this site selection study. Importance of offshore measurements is discussed. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Island Sheltering of Surface Gravity Waves: Model and Experiment AUTHOR(S): Pawka, S. S.; Inman, D. L.; Guza, R. T. SOURCE: Continental Shelf Research, Vol. 3, No. 1, Pergamon Press, pp. 35-53 DATE: 01/01/84

ABSTRACT: A field experiment is used to evaluate a numerical model of the sheltering of gravity waves by islands offshore of the Southern California region. Includes only the effects of island blocking and wave refraction over the island bathymetry. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region, Subregion X, Oceanside Cell Coastal Engineering Research Center Field Wave Gaging Program AUTHOR(S): Peacock, H. G. SOURCE: U. S. Army Corps of Engineers, Coastal Engrg. Res. Ctr., CERC Reprint 5-74; and Proc. of Int'l Symposium on Ocean Wave Meas. and Analysis, New Orleans, La., ASCE, N. Y., pp. 170-185 DATE: 09/01/74 Wave gaging program; 23 gages at 19 different locations have ABSTRACT: acquired data since 1948, and have routinely made this data available to U.S. Army Corps of Engineers offices. KEYWORDS: Coastal Processes wave climate, wave transformation California Annotated Bibliography On Wave-Current Interaction AUTHOR(S): Peregrine, D. H.; Jonsson, I. G.; Galvin, C. J. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Misc. Report 83-7, 82 pp. DATE: 03/01/83 ABSTRACT: Annotated bibliography of 60 key publications dealing with wave-current interaction. KEYWORDS: Coastal Processes coastal currents, nearshore currents, wave climate, wave transformation California, South Coast Region, Subregion VIII, Santa Monica Cell A Numerical Model to Simulate Sediment Transport in the Vicinity of Coastal Structures AUTHOR(S): Perlin, M.; Dean, R. G. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Misc. Report 83-10, 117 pp. DATE: 05/01/83 ABSTRACT: An implicit finite-difference, n-line numerical model is developed to predict bathymetric changes in the vicinity of coastal structures. The wave field transformation includes refraction, shoaling, and diffraction. The model is capable of simulating one or more shore-perpendicular structures, movement of offshore disposal mounds, and beach fill evolution. The structure length and

location, sediment properties, equilibrium beach profile, etc., are user-specified along with the wave climate. KEYWORDS: Coastal Processes coastal structures, longshore transport, California, South Central Region, Subregion VII, Santa Barbara Cell Relative Abundances of Living and Dead Molluscs in Two California Lagoons AUTHOR(S): Peterson, C. H. SOURCE: Lethaia, Vol. 9, pp. 137-148 DATE: 01/01/76 ABSTRACT: Species by species comparison of the living and dead molluscs found together in the same samples suggests that post-mortem transportation is insignificant within this high energy habitat. KEYWORDS: Geomorphology estuarine sediment storage, geomorphic processes, sedimentation California, South Central Region, San Diego Region, Subregion VII, Subregion X, Oceanside Cell Synoptic Analysis of the Southern California Flood of March 2, 1938 AUTHOR(S): Pierce, C. H. Monthly Weather Review, Vol. 66, pp. 135-139 SOURCE: DATE: 05/01/38 ABSTRACT: A synoptic overview of weather which produced devastating floods in Southern California. Rains were caused by a deep low with a warm sector extended in an east-southeast direction instead of the usual south direction. Warm front brought in moist tropical air followed by a cold front. Strong orographic effects were observed. KEYWORDS: Oceanography & Meteorology precipitation, storms/floods California, South Central Region, South Coast Region, San Diego Region Transport and Deposition of Holocene Sediment on La Jolla Deep Sea Fan, California AUTHOR(S): Piper, D. J. SOURCE: Marine Geology, Vol. 8, pp. 211-227 DATE: 01/01/70 ABSTRACT: In this report near-surface sediments on La Jolla Fan are studied using over 100 cores. KEYWORDS: Geomorphology, Coastal Processes geology, geomorphic processes, submarine canyons, littoral sediment California, San Diego Region, Subregion X Re-Examination of a Miocene Deep-Sea Fan and Fan Valley, Southern California AUTHOR(S): Piper, J. W.; Normark, W. R. SOURCE: Geologic Society of America Bulletin, Vol. 82, pp. 1823-1830 DATE: 01/01/71 ABSTRACT: In this report new three-dimensional exposures of the Miocene Lower Capistrano Formation near Dana Point, Southern California, show all the principal depositional environments of the upper part of a deep-sea fan.

KEYWORDS: Geomorphology cliff sediment, geology, maps, littoral sediment California, San Diego Region, Subregion X, Oceanside Cell California Coast Nearshore Processes Study, ERTS-1 Experiment #088, Final Report for Period August 1972-May 1974 AUTHOR(S): Pirie, D. M.; Stellar, D. D. U. S. Army Corps of Engineers, San Francisco District, Calif.; SOURCE: and Geoscience Divn., Geoscience International, Inc., Seal Beach, California, 164 pp. DATE: 05/01/74 ABSTRACT: The study objectives were to analyze nearshore currents, sediment transport and estuarine and river discharges along the California coast through the use of synoptic, repetitive imagery from the Earth Resources Technology Satellite (ERTS). Four test sites along the California coast (San Francisco, Monterey Bay, Santa Barbara Channel, and Los Angeles) were emphasized during the interpretation of the overall ocean surface dynamic structure. The surface current characteristics for the three ocean seasons and for each month were plotted. Much useful insight into the location and dynamic characteristics of the KEYWORDS: Coastal Processes aerial photography, coastal currents, nearshore currents, longshore transport, remote sensing, river sediment discharge California, South Central Region, South Coast Region, San Diego Region California Nearshore Surface Currents AUTHOR(S): Pirie, D. M.; Murphy, R.; Edminston, R. SOURCE: Shore & Beach, Vol. 43, No. 2, pp. 23-34 DATE: 04/01/75 ABSTRACT: not reviewed KEYWORDS: Coastal Processes nearshore currents California California Coastal Processes Study - Landsat II, Final Report AUTHOR(S): Pirie, D. M.; Steller, D. D. SOURCE: U. S. Army Corps of Engineers, San Francisco District, San Francisco, California, 163 pp. DATE: 01/01/77 ABSTRACT: This study reports on the continued use of Landsat data in the analysis and description of long and short-term littoral and nearshore processes

along the California coast. The specific objectives of this investigation included the determination of sediment transport parameters measurable in the Landsat data, and application of this information to everyday coastal planning and construction. By using suspended sediments as tracers, other specific objectives were met by the qualitative definition of the nearshore circulation along the entire coast of Calif- ornia with special study sites at Humboldt Bay, the mouth of the Russian River, San Francisco Bay, Monterey Bay, and the Santa Barbara Channel. KEYWORDS: Geomorphology, Coastal Processes river sediment discharge, longshore transport, maps, remote sensing, nearshore currents, sedimentation California, South Central Region, South Coast Region, San Diego Region, Santa Barbara Cell, Oceanside Cell Man's Role in Geomorphic Change on the Shorelines of Los Angeles County, California AUTHOR(S): Place, J. L. SOURCE: Ph. D. Dissertation, University of Southern California, Los Angeles, California DATE: 01/01/70 ABSTRACT: not reviewed KEYWORDS: Coastal Processes geomorphic processes, institutions/planning/mgmt., coastal erosion problems, shoreline changes, urbanization California, South Coast Region, Subregion VIII, Subregion IX Sea Cliffs of Southern California: Malaga Cove to Dana Point, Geology and Geologic Hazards AUTHOR(S): Ploessel, M. R. M. A. Thesis, University of Southern California, Los Angeles, SOURCE: California, 110 pp. DATE: 01/01/72 ABSTRACT: This report describes sea cliff landslides, marine erosion, and earthquakes that have caused millions of dollars damage along 38 miles of coastline between Malaga Cove and Dana Point. KEYWORDS: Geomorphology, Coastal Processes cliff sediment, coastal erosion, geology, coastal erosion problems, neotectonics, shoreline changes California, South Coast Region, Subregion VIII, Subregion IX, S. Santa Monica Reach, San Pedro Cell, S. San Pedro Reach

The Source and Distribution of Beach Sediments, Santa Barbara County, California

AUTHOR(S): Pollard, D. SOURCE: Ph. D. Dissertation, University of California, Santa Barbara, California DATE: 01/01/79 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology beaches, littoral sediment, geology, geomorphic processes California, South Central Region, Subregion VII Feasibility Study for Harbor Development, San Clemente Island, California AUTHOR(S): Porter, Urquhart, McCreary & O'Brien SOURCE: For: U. S. Navy, Bureau of Yards & Docks, 11th Naval District, Public Works Office, San Diego, California; Porter, Urquhart, McCreary & O'Brien, Cons. Engrs., Los Angeles, Calif., 100+ pp. DATE: 12/01/56 ABSTRACT: Determination of the feasibility of developing a harbor at San Clemente Island to support the proposed Naval air mission. Study is restricted to north half of the leeward side of the island. The study includes hydrographic, topographic, and foundation surveys; compilation of meteorologic data, oceanographic analysis, logistic analysis, and preparation of schematic sketches of the harbor development with cost estimates. Includes data. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, hydrographic surveys, California, San Diego Region, Subregion X Santa Ana Investigation, Flood Control and Conservation AUTHOR(S): Post, W. S. SOURCE: BUlletin No. 19, State of California, Department of Public Works, Division of Engineering and Irrigation, Sacramento, California, 368 pp. DATE: 12/01/28 Wealth of informatin from historical point of view. ABSTRACT: Includes watershed descriptions and general information. Includes data. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, reservoirs, watersheds, storms/floods California, South Coast Region, Subregion IX, San Pedro Cell Erosion Control Facilities - Mitigating Their Effect on Coastal Sediment Supplies AUTHOR(S): Potter, D. M. SOURCE: Coastal Zone '83, Symposium, San Diego, California, June 1-4, 1983, Vol. III; ASCE, N. Y., pp. 2317-2327 DATE: 01/01/83 ABSTRACT: Discussion of sediment placement at the shoreline along the Los Angeles County coast. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal erosion problems, coastal structures, littoral sediment, longshore transport

California, South Coast Region, Subregion VIII, Subregion IX The San Diego Regional Coastal Access Study AUTHOR(S): Prescott, D. A. SOURCE: Coastal Zone '80 Symposium, Hollywood, Florida, November 17-20, 1980, Vol. II; ASCE, N. Y., pp. 1662-1683 DATE: 01/01/80 ABSTRACT: A discussion of the study which was to develop a new element of the Regional Transportation Plan to comply with new policy direction. Subsequent to investigations of case studies, an analysis was conducted to determine types and magnitudes of recreational access problems for each site. KEYWORDS: Coastal Processes, Socioeconomics growth potential/recreation, institutions/planning/mgmt., shoreline use California, San Diego Region, Subregion X, Oceanside Cell, S. Oceanside Reach, Mission Bay Cell, S. Mission Bay Reach, Silver Strand Cell Hydrology and Sedimentaion Study of the Los Penasquitos Lagoon and Drainage Basin AUTHOR(S): Prestegaard, K. L. SOURCE: California Coastal Commission Memorandum, Unpublished Memo, Sacramento, California, 33 pp. DATE: 01/01/78 ABSTRACT: Hydrologic and geomorphologic survey of Las Penasquitos Lagoon and drainage basin. The basin was found to have three unstable (eroding) sub-basins, two depositional regions, and one stable region. Sedimentation rates were estimated from measured deposition. Discusses relationship with development and local construction. KEYWORDS: Hydrology & Hydraulics, Geomorphology estuarine sediment storage, geomorphic processes, sedimentation, urbanization California, San Diego Region, Subregion X, Oceanside Cell Diurnal Variations in Visually Observed Breaking Waves AUTHOR(S): Pritchett, P. C. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., CERC Misc. Report 76-8 DATE: 05/01/76 ABSTRACT: Over 53 visual observations made 4 times daily during June, July, and August. The average monthly diurnal variations in breaker height ranged from 0.05 to 0.36 foot; diurnal variations averaged about 10 per cent of the monthly mean height. KEYWORDS: Coastal Processes wave climate, wave transformation California, Oregon, Mexico

Geomorphology of the Ventura Region, California AUTHOR(S): Putman, W. C. SOURCE: Geologic Society of America Bulletin, Vol. 53, pp. 691-754 DATE: 01/01/42 ABSTRACT: The report describes the effects on the landscape of erosion and active faulting in the Ventura area. KEYWORDS: Geomorphology cliff sediment, geology, maps, neotectonics, geomorphic processes California, South Central Region, Subregion VII, Santa Barbara Cell Return Peirods of 1977-1980 Precipitation in Southern California and Arizona AUTHOR(S): Pyke, C. B. SOURCE: In: Proc. of Storms, Floods and Debris Flows in Southern California and Arizona, 1978 and 1980, National Academy Press., Washington, D. C., pp. 77-86 DATE: 09/17/80 ABSTRACT: An analysis of return periods for major storms in Southern California and Arizona. Found many cases of more than 100 year return periods, with some possible 1000 to 10,000 year return periods. In 1977-78 period most Southern California and Arizona stations received from 2.5 to 4.0 times the normal rainfall (mid-December through mid-March). KEYWORDS: Oceanography & Meteorology precipitation, storms/floods California Maps Showing Areas of Estimated Relative Amounts of Landslides in California AUTHOR(S): Radbruch, D. H.; Crowther, K. C. SOURCE: Misc. Investigation Map I-747, U. S. Dept. of Interior, Geological Survey, Reston, Virginia DATE: 01/01/73 Regional state-wide maps showing relatively large areas, ABSTRACT: plus-or-minus 10 square miles, as six types of areas covered by landslides; scale 1:1,000,000. KEYWORDS: Geomorphology geology, geomorphic processes, maps, watershed sediment California, South Central Region, South Coast Region, San Diego Region Fire History of the Santa Monica Mountains AUTHOR(S): Radtke, K. W. H.; Arndt, A. M.; Wakimoto, R. H. SOURCE: In: Symposium on Dynamics and Management of Mediterranean-Туре Ecosystems, June 22-26, 1981, San Diego, Calif.; USFS, PSW F & R Exp. Sta., Gen. Tech. Rpt. PSW-58, Berkeley, California DATE: 06/22/81

ABSTRACT: Gives fire frequency of the Santa Monica Mountains, for the period 1900 to 1980. Looks at fire factors (land use, vegetation), climate, wind patterns, Santa Ana wind conditions. Shows that area has a high frequency for both pre- and post-fire suppression eras on the coastal slopes as opposed to inland slopes. All fires were of anthropogenic origins. KEYWORDS: Hydrology & Hydraulics climatology, fires, watersheds California, South Coast Region, Subregion VIII, Santa Monica Cell Meteorological Aspects of El Nino AUTHOR(S): Ramage, C. S.; Hori, A. M. SOURCE: Monthly Weather Review, Vol. 109, No. 9, pp. 1827-1835 DATE: 09/01/81 ABSTRACT: Analysis of 1972 through 1973 "El Nino" shows that upwelling and sea surface temperature are directly related. Shows that oceanic heat loss is a function of wind speed, and thus tropical heating and heat loss are closely linked to trade winds. It was also, found that the distribution of tropical cyclones was not greatly affected by El Nino. KEYWORDS: Oceanography & Meteorology El Nino, climatology California El Nino - The Great Equatorial Pacific Ocean Warming Event of 1982-1983 AUTHOR(S): Rasmusson, E. M.; Hall, J. M. SOURCE: Weatherwise, Vol. 36, No. 4, pp. 166-175 DATE: 09/01/83 ABSTRACT: Gives a detailed description of El Nino phenomenon. Lists events possibly related, including the 1983 storms that causes coastal damage in California. Includes data and photos. KEYWORDS: Oceanography & Meteorology El Nino, climatology California Central California Coastal Circulation Study - First Interim Report AUTHOR(S): Raytheon Service Company SOURCE: For: U. S. Dept. of Interior, Minerals Management Service; California Divn. of Mines, Sacramento, California, 28 pp. DATE: 10/14/83 ABSTRACT: Basic objectives of study were to 1) obtain a set of observations of ocean mass and velocity fields off the Central California coast (to Point Conception) which are appropriate for use in numerical simulation; and 2) develop a coherent and detailed description of these fields and their seasonal and shorter period of variation. The first interim report was intended to serve

as a basis for discussion at the first program workshop and thereby determine possible modification to the program as recommended. KEYWORDS: Coastal Processes coastal currents, hydrographic surveys, California, South Central Region Depositional Environment of Anaheim Bay Salt Marsh, Seal Beach, California AUTHOR(S): Reardon, J. B. SOURCE: Master's Thesis, California State University, Long Beach, California DATE: 01/01/81 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics estuarine sediment storage, sedimentation California, South Coast Region, Subregion IX, San Pedro Cell Rain Bearing Winds in the Far Western States AUTHOR(S): Reed, T. R. SOURCE: Monthly Weather Review, Vol. 55, No. 5, pp. 228-233 DATE: 05/01/27 ABSTRACT: The report attempts to relate rain to wind direction in the western United States. Includes data. KEYWORDS: Oceanography & Meteorology climatology, precipitation, wind California, South Central Region, South Coast Region, San Diego Region Weather Types of the Northeast Pacific Ocean as Related to the Weather of the North Pacific Coast. AUTHOR(S): Reed, T. R. SOURCE: Monthly Weather Review, Vol. 60, No. 12, pp. 246-252 DATE: 12/01/32 ABSTRACT: Gives a description of weather patterns and resulting storm types. It is useful as an historical reference point for detailing possible changes in meteorological characteristics. KEYWORDS: Oceanography & Meteorology storms/floods, climatology California Modification of Drainage in the El Segundo Sand Hills of Coastal Southern California AUTHOR(S): Reeves, R. W. SOURCE: M. A. Thesis, University of California at Los Angeles, California, 139 pp. DATE: 01/01/64 ABSTRACT: This report describes the effects of urbanization on the El Segundo Sand Hills, a tract of wind-modified coastal sand features along the western

margin of the Los Angeles lowland. The effects of urbanization have resulted in significant and site specific alterations in the natural drainage. KEYWORDS: Geomorphology, Hydrology & Hydraulics dunes, geomorphic processes, urbanization, river discharge, river sediment discharge, watershed sediment California, South Coast Region, Subregion VIII, Santa Monica Cell Physical Oceanography of the Region Near Point Arguello AUTHOR(S): Reid, J. L. SOURCE: IMR 65-19, Institute of Marine Research, University of California at San Diego, La Jolla, California DATE: 01/01/65 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, coastal currents, wave climate California, South Central Region, Subregion VII, Santa Ynez River Cell, Santa Barbara Cell Four Hundred Sixty Storms - Data from the San Dimas Experimental Forest AUTHOR(S): Reimann, L. F.; Hamilton, E. L. Misc. Paper 37, U. S. Department of Agriculture, Forest SOURCE: Service, Pacific Southwest Forest and Range Experiment Station, Berkeley, California, 100 pp. DATE: 07/01/59 Tables of rainfall data for 25 years (1933-1958) from the San ABSTRACT: Dimas Forest. Includes daily and hourly data, storm averages, intensities, wind speed data, temperatures, and times. KEYWORDS: Oceanography & Meteorology precipitation, wind California, South Coast Region, Subregion IX, San Pedro Cell Sediments Off the California Coast AUTHOR(S): Revelle, R.; Shepard, F. P. In: Recent Marine Sediments, P. D. Trask, Ed., Dover SOURCE: Publications, N. Y., 736 pp. DATE: 01/01/39 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology littoral sediment, sedimentation, geology California, South Central Region, South Coast Region, San Diego Region A Monthly Averaged Climatology of Sea Surface Temperature AUTHOR(S): Reynolds, R. W. SOURCE: Tech. Report NWS 31, U. S. Department of Commerce, NOAA, Washington, D. C. DATE: 06/01/82

ABSTRACT: Monthly one degree, global, sea surface temperature maps, based on the National Climatic Summary of Surface Marine Reports. Useful for background temperatures of sea surface. KEYWORDS: Oceanography & Meteorology climatology California Sources of Sand on the Pocket Beaches of Palos Verdes Peninsula, California AUTHOR(S): Reynolds, S.; Smith, T. SOURCE: The Compass of Sigma Gamma Epsilon, Vol. 61, No. 1, pp. 18-21 DATE: 01/01/83 ABSTRACT: This report describes the sources of sand on pocket beaches of Palos Verdes Peninsula, California, through a petrologic study of cliff and beach offshore and longshore drift sand samples. Each cove has a specific local source of sand and the area cannot be viewed as a single system of sediment circulation. KEYWORDS: Geomorphology, Coastal Processes beaches, cliff sediment, geology, littoral sediment, petrology California, South Coast Region, Subregion VIII, S. Santa Monica Reach Relationships Between Sand Input from Rivers and the Composition of Sand From the Beaches of Southern California AUTHOR(S): Rice, R. M.; Gorsline, D. S.; Osborne, R. H. SOURCE: Sedimentology, Vol. 23, pp. 689-703 DATE: 01/01/76 Through multivariate statistical analysis of the heavy ABSTRACT: mineral distribution of Southern California rivers and beaches, this report shows that the sand composition of the two northern beach cells is controlled by the dominantly sedimentary Transverse Range province, whereas the composition of the three southern cells is controlled by the dioritic Peninsular Ranges. Some leakage occurs between the two northern cells around the Point Dume-Huemene-Mugu Canyon Zone, whereas no important southward mixing occurs between cells around the Palos Verdes-Redondo Canyon Zone. KEYWORDS: Geomorphology, Coastal Processes, Hydrology & Hydraulics geomorphic processes, longshore transport, littoral sediment, river-bed sediment, submarine canyons, petrology California, South Central Region, South Coast Region, San Diego Region, Santa Barbara Cell, Santa Monica Cell Beach Nourishment Techniques, Report 1; Dredging Systems for Beach Nourishment From Offshore Sources AUTHOR(S): Richardson, T. W.

SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report H-76-13, 81 pp. DATE: 09/01/76 ABSTRACT: The result of the first two phases of a research project aimed at developing new dredging systems for beach nourishment from offshore sources is presented. The current situation in the U.S. regarding beach nourishment and offshore dredging equip- ment is outlined. Example nourishment projects are described in order to illustrate the types of nourishment projects accomplished and the range of equipment used to date; engineering considerations in selecting an optimum nourishment system for a particular project or project category and their effects on system characteristics are discussed; the results of an investigation into equipment suitable for offshore nourishment KEYWORDS: Coastal Processes beach nourishment/dredging, mining California, South Central Region, Subregion VII, Santa Barbara Cell Preliminary Designs for Sand Bypassing, Oceanside Harbor, California AUTHOR(S): Richardson, T. W.; Clark, G. R. SOURCE: Hydraulics Lab., U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi, 15+ pp. DATE: 01/01/82 ABSTRACT: Presentation of designs to allow preliminary cost estimates. Includes data on equipment and jet system. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt. California, San Diego Region, Subregion X, Oceanside Cell California Undersea Aqueduct Reconnaissance: The Oceanography AUTHOR(S): Riffenburgh, R. H. SOURCE: Research and Development Report No. NUC-TP-353, U. S. Navy, Naval Undersea Center, San Diego, California, 231 pp. DATE: 08/01/73 ABSTRACT: The report discusses the possibility of conveying fresh water from northern to southern California via a subsurface offshore aqueduct (California Undersea Aqueduct). The specific region investigated was between Crescent City and San Diego from the 20 meter depth to 200 meter depth countour. All available data on relevant variables were analyzed to provide information for aqueduct planning decisions. The variables and analyses most influential in planning the aqueduct were divided into two categories: variables influencing the 100-year survival of the aqueduct and variables influencing the construction

and maintenance of the aqueduct. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, coastal structures, nearshore currents, storm waves, tsunamis, wave climate California, South Central Region, South Coast Region, San Diego Region Cyclic Sedimentation in Agua Hedionda Lagoon, Southern California AUTHOR(S): Ritter, J. R. SOURCE: Journal of Waterways and Harbors, Coastal Engineering Division, ASCE, N.Y., Vol. 98, No. WW4, pp. 595-602 DATE: 01/01/72 ABSTRACT: Agua Hedionda Lagoon is located near Carlsbad, California. This study indicates the rate of sediment deposition in the lagoon from 1955 to 1961. Since its initial dredging in 1954 by the San Diego Gas and Electric Company, the Lagoon has become a sediment trap that must be dredged almost yearly. KEYWORDS: Geomorphology, Coastal Processes beaches, sand entrapment, sedimentation, tidal inlets, longshore transport, estuarine sediment storage California, San Diego Region, Subregion X, Oceanside Cell Cyclic Sedimentation in Aqua Hedionda Lagoon, Southern California AUTHOR(S): Ritter, J. R. SOURCE: Proc. of ASCE, Journal of Waterways, Harbors and Coastal Engineering Division, Vol. 98, No. WW4, pp 597-602 DATE: 11/01/72 ABSTRACT: Uses dredging records of 1955 to estimate sediment transport to Agua Hedionda Lagoon in the San Diego region. Gives monthly sedimentation rates based on cross-sectional profiles for the 1955 to 1957 period. Concludes that the lagoon is significant sediment trap, based on estimates of sediment losses to Scripps submarine canyon. KEYWORDS: Hydrology & Hydraulics, Coastal Processes estuarine sediment storage, sedimentation, beach nourishment/dredging, littoral sediment California, San Diego Region, Subregion X, Oceanside Cell Geomorphic and Sedimentologic Analysis for Oceanside Project, Phase II AUTHOR(S): Robert H. Osborne and Associates SOURCE: Draft For: U. S. Army Corps of Engineers, Los Angeles District; Robert H. Osborne and Associates, Los Angeles, California, 81 pp. DATE: 01/01/82 ABSTRACT: Continuation of a study of the geomorphology and sedimentology of portions of the Los Flores Creek, the Santa Margarita and San Luis Rey Rivers,

and smaller adjacent drainages. This report includes a review of the regional and local geology with emphasis on source areas for sediment transport to the Oceanside littoral system. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics geology, geomorphic processes, littoral sediment, river sediment discharge, watershed sediment California, San Diego Region, Subregion X, Oceanside Cell Geotechnical Investigation of Abalone Cove Landslide, Rancho Palos Verdes, Los Angeles County, California AUTHOR(S): Robert Stone and Assoc. For: City of Rancho Palos Verdes, Robert Stone and Associates, SOURCE: Inc., Canoga Park, California, 100+ pp. DATE: 02/28/79 ABSTRACT: The report presents findings, conclusions, and recommendations of an investigation to determine boundaries and geometry of the active Abalone Cove Landslide, and the factors contributing to past and present movement. Includes recommendations for remedial action, and a geologic map. KEYWORDS: Coastal Processes, Geomorphology coastal erosion problems, geology, geomorphic processes, cliff sediment California, South Coast Region, Subregion VIII, S. Santa Monica Reach Marine Studies of San Pedro Bay, California, Part VI: Current Measurements in the Outer Los Angeles Harbor AUTHOR(S): Robinson, K. S.; Porath, H. SOURCE: USC-SC-7-74 Sea Grant Program Publication, University of Southern California, Los Angeles, California, 91 pp. DATE: 07/01/74 ABSTRACT: not reviewed KEYWORDS: Coastal Processes longshore transport, nearshore currents California, South Coast Region, Subregion IX, San Pedro Cell Ventura Harbor Sand Bypass Development Project, Partial Report AUTHOR(S): Rod Lundin and Associates SOURCE: For: Ventura Port District, Rod Lundin & Associates, Northridge, California, 38 pp. DATE: 03/01/78 ABSTRACT: The study identifies the quantity and deposition pattern of the littoral drift in the vicinity of the harbor, analyzes methods of efficiently and economically bypassing the sand transport, determines structural modifications to resolve wave problems, and estimates the capital improvements, operations, and maintenance costs of the proposed improvements.

KEYWORDS: Coastal Processes coastal structures, littoral sediment, longshore transport, wave climate, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell Ventura Harbor Sand Bypass Economic Study AUTHOR(S): Rod Lundin and Associates For: U. S. Army Corps of Engineers, Los Angeles District, SOURCE: California; Rod Lundin and Associates, Northridge, California, 31 pp. DATE: 07/01/79 ABSTRACT: This report presents economic data regarding the relative cost of sand bypassing at the entrance of Ventura Harbor for floating dredges or sand bypass. Includes data on waves. KEYWORDS: Coastal Processes, Socioeconomics institutions/planning/mgmt., longshore transport, beach nourishment/dredging, sand entrapment, wave climate California, South Central Region, Subregion VII, Santa Barbara Cell Annual Suspended Sediment Supplied to the California Continental Borderland by the California Watershed AUTHOR(S): Rodolfo, K. S. SOURCE: Journal of Sedi. Petr., Vol. 40, No. 2, pp. 666-671 DATE: 01/01/70 ABSTRACT: not reviewed KEYWORDS: Coastal Processes river sediment discharge, sedimentation, watershed sediment California, South Central Region, South Coast Region, San Diego Region Annual Suspended Sediment Supplied to the California Continental Borderland by the Southern California Watershed AUTHOR(S): Rodolfo, K. S. SOURCE: Journal of Sedimentary Petrology, Vol. 40, No. 2, pp. 666-671 DATE: 06/01/70 ABSTRACT: Prominent Southern California streams were sampled at their mouths during a rainy season to determine the concentration, grain sizes, minerology, and quantities of suspended sediment supplied to the ocean by the Los Angeles, San Gabriel and Santa Ana River watersheds. An average annual suspended sediment discharge estimate of 717,000 metric tons/year is discharged by all three watersheds combined. This is extra- polated to 3.5 million tons/year of suspended sediment for all of Suthern California. An estimate of 4.2 million tons/ year of bed sediment (stream traction) discharge is made based on an extrapolation of Emery (1960) which is an extrapolation of Handin (1951). The

total average annual sediment discharge KEYWORDS: Hydrology & Hydraulics river sediment discharge, grain size, watershed sediment, river-bed sediment California, South Coast Region, Subregion IX, San Pedro Cell Suspended Sediment in Southern California Waters AUTHOR(S): Rodolpho, K. S. SOURCE: Master's Thesis, University of Southern California, Los Angeles, California, 135 pp. DATE: 01/01/64 ABSTRACT: not reviewed KEYWORDS: Coastal Processes sedimentation California, South Central Region, South Coast Region, San Diego Region Fire Management in Southern California AUTHOR(S): Rogers, M. J. In: Symposium on Dynamics and Management of Mediterranean- Type SOURCE: Ecosystems, June 22-26, 1981, San Diego, Calif., USFS, PSW F&R Exp Sta, Gen Tech Rpt PSW-58, Berkeley, Calif., pp. 496-501 DATE: 06/22/81 ABSTRACT: Discusses historical fire suppression strategy, the results and the new fire management techniques. Discusses the effects of fires on sediment and floods, and the effects of fire intensity. Includes Santa Ana wind frequency. KEYWORDS: Hydrology & Hydraulics fires, sedimentation, storms/floods, watershed sediment California, South Central Region, South Coast Region, San Diego Region Geologic Map of California, Santa Ana Sheet AUTHOR(S): Rogers, T. H. California Division of Mines and Geology, Sacramento, SOURCE: California DATE: 01/01/65 ABSTRACT: Geologic Map Scale 1:250,000 with index of maps used to compile the Santa Ana sheet, Orange and San Diego Counties. KEYWORDS: Geomorphology qeology, maps California, South Coast Region, Subregion IX, San Pedro Cell, S. San Pedro Reach, Oceanside Cell Use of Heavy Minerals as Tracers of Sand Transport on the Santa Barbara-Oxnard Shelf, Santa Barbara Channel, California AUTHOR(S): Roig, J. H. SOURCE: M. S. Thesis, University of Southern California, Los Angeles, California, 83 pp. DATE: 01/01/76 ABSTRACT: Sand transport patterns in the Santa Barbara shelf system are described based on analysis of heavy mineral distribution.

KEYWORDS: Geomorphology, Coastal Processes littoral sediment, offshore/onshore transport, petrology, longshore transport California, South Central Region, Subregion VII, Santa Barbara Cell Mexican West Coast Tropical Storms 1947-1961 AUTHOR(S): Rosendal, H. E. SOURCE: Weatherwise, Vol. 16, No. 5, pp. 226-229 DATE: 10/01/63 ABSTRACT: Gives statistics and tracks of tropical storms in the eastern north Pacific Ocean, from 1947 to 1961. Includes a brief discussion, but provides some interesting tracks, covering 14 years of data. KEYWORDS: Oceanography & Meteorology storms/floods California, South Central Region, South Coast Region, San Diego Region Hydrologic Analysis Used to Determine Effects of Fire on Peak Discharge and Erosion Rates in Southern California AUTHOR(S): Rowe, P. B.; Countryman, C. M.; Storey, H. C. SOURCE: U. S. Forest Service, Department of Agriculture, Pacific Southwest Forest and Range Experiment Station, Berkeley/Riverside, California, 49+ qα. DATE: 02/01/54 ABSTRACT: Used data from the U. S. Geological Survey and Los Angeles County Flood Control District to do the analysis. Determined hydrologic and erosion effects of fires up to ten years after a burn. KEYWORDS: Hydrology & Hydraulics fires, watersheds, watershed sediment, river discharge California, South Coast Region Evaluation of Check Dams for Sediment Control, Los Angeles River Watershed AUTHOR(S): Ruby, E. C. SOURCE: U. S. Forest Service, Angeles National Forest, California Division DATE: 01/01/73 ABSTRACT: Approximately 60 percent of debris is stopped by check dams the first season, but decreasing amounts are stopped in successive seasons. Six small Los Angeles River sub-basins were examined in the study. Includes data KEYWORDS: Hydrology & Hydraulics watershed sediment, sedimentation California, South Coast Region, Subregion VIII, Subregion IX Sediment Trend Study, 1973 Los Angeles River Watershed AUTHOR(S): Ruby, E. G. SOURCE: U. S. Forest Service, Angeles National Forest, California Division DATE: 01/01/73

ABSTRACT: An analysis of the response of Dunsmore Canyon to check dam treatment. Found that a definite correlation exists between installation of check dams and debris flow reduction, but that the effect was temporary. There is no permanent reduction in debris flow (after eight years). Includes data. KEYWORDS: Hydrology & Hydraulics watershed sediment, sedimentation California, South Coast Region, Subregion VIII, Subregion IX Upper San Diego River Flood Control Investigation AUTHOR(S): Ryono, T.; Kanga, F.; et al. SOURCE: Bulletin No. 182, State of California, Department of Water Resources Agency, Sacramento, California, 99+ pp. DATE: 02/01/76 ABSTRACT: Updated hydrologic data on the upper San Diego River and San Vicente Creek, along with a reevalution of El Capitan and San Vicente Reservoirs. Delineates potential inundation areas for 10 and 100 year floods. Study area includes a major portion of the San Diego area watershed KEYWORDS: Hydrology & Hydraulics reservoirs, river discharge, storms/floods, watersheds California, San Diego Region, Subregion X Erosion and Sedimentation in San Diego Watersheds AUTHOR(S): Ryono, T.; Kanga, F.; Qazi, I. SOURCE: State of California, Dept. of Water Resources, Sacramento, California, 61 pp. DATE: 01/01/77 ABSTRACT: Contains sediment yield estimates for San Marcos Creek, Escondido Creek, San Dieguito River, San Diego River, and Sweetwater River. KEYWORDS: Hydrology & Hydraulics river sediment discharge California, San Diego Region, Subregion X, Oceanside Cell, Mission Bay Cell, Silver Strand Cell Erosion and Sedimentation in San Diego Watersheds AUTHOR(S): Ryono, T.; Kanga, F.; Qazi, I. SOURCE: State of California, Dept. of Water Resources, Sacramento, California, 61 pp. DATE: 01/01/77 ABSTRACT: Contains sediment yield estimates for San Marcos Creek, Escondido Creek, San Dieguito River, San Diego River, and Sweetwater River. KEYWORDS: Hydrology & Hydraulics river sediment discharge California, San Diego Region, Subregion X, Oceanside Cell, Mission Bay Cell, Silver Strand Cell

Beach-Cusp Formation AUTHOR(S): Sallenger, A. H. SOURCE: Marine Geology, Vol. 29, No. 1-4, pp. 23-37 DATE: 01/01/79 ABSTRACT: Field experiments on beach-cusp formation were performed to document how the cuspate form develops and to test the edge-wave hypothesis on the uniform spacing of cusps. These involved observations of cusps forming from an initially plane foreshore. KEYWORDS: Coastal Processes wave transformation, beaches, beach profiles, offshore/onshore transport California A Study to Determine Needed Watershed Erosion and Sediment Control Practices Above Morena Reservoir, San Diego County, California AUTHOR(S): San Diego City; Soil Conservation Service and Forest Service; Department of Agriculture SOURCE: San Diego County Report, Open File Report, 33 pp. DATE: 11/01/53 ABSTRACT: Investigation to determine action to reduce sedimentation in Morena Reservoir. Includes sedimentation measurements, and sediment analysis. KEYWORDS: Hydrology & Hydraulics reservoirs, sedimentation, watershed sediment California, San Diego Region, Subregion X, Silver Strand Cell Hydrology Report 1968-1969 Season AUTHOR(S): San Diego County; Department of Sanitation and Flood Control SOURCE: County of San Diego, Department of Sanitation and Flood Control, Flood Control Division, San Diego, California, 74 pp. DATE: 01/01/69 ABSTRACT: Details of 1969 storms and floods in San Diego County. Includes precipitation data, isohyetal maps (seasonal and storm), and streamflow (seasonal and daily). KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge California, San Diego Region, Subregion X San Luis Rey River, Hydrology Study AUTHOR(S): San Diego County, Public Works Agency SOURCE: County of San Diego, Department of Sanitation and Flood Control, Public Works Agency, San Diego, California, 23 pp. DATE: 09/01/75 ABSTRACT: Gives hydrographs of San Luis Rey. Also includes storm design data for precipitation at six stations in the watershed. KEYWORDS: Hydrology & Hydraulics precipitation, river discharge, storms/floods, watersheds California, San Diego Region, Subregion X, Oceanside Cell Hydrology Report 1968-1969 Season AUTHOR(S): San Diego Ct. Dept. of Flood Control

SOURCE: Department of Sanitiation and Flood Control, Flood Division, San Diego County, California, 74 pp. DATE: 01/01/69 ABSTRACT: Details of the 1969 storms and floods in San Diego County. Includes data. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge California, San Diego Region, Subregion X Beach Erosion Problems Within the City of San Diego AUTHOR(S): San Diego, City of SOURCE: Engineering Dept., City of San Diego, California DATE: 06/01/70 ABSTRACT: not reviewed KEYWORDS: Coastal Processes beaches, coastal erosion, coastal erosion problems California, San Diego Region, Subregion X, Mission Bay Cell, S. Mission Bav Reach, Silver Strand Cell Sunset Cliffs (Newport Avenue to Osprey Street) Shoreline Protection Study AUTHOR(S): San Diego, City of SOURCE: City of San Diego, California, 100 pp. DATE: 12/01/76 ABSTRACT: This report is in response to City Council direction to analyze various comprehensive solutions to the problems of shoreline protection and cliff erosion for the segment of shoreline between Newport Avenue and Osprey Street, San Diego, California. Includes data. KEYWORDS: Coastal Processes coastal erosion, shore protection, cliff sediment, coastal erosion problems California, San Diego Region, Subregion X, S. Mission Bay Reach Watershed Work Plan for the Arroyo Grande Creek Watershed, San Luis Obispo County, California AUTHOR(S): San Luis Obispo County;; Arroyo Grande Soil Conservation District SOURCE: Arroyo Grande Soil Conservation District and the San Luis Obispo County Flood Control and Water Conservation District, San Luis Obispo, California, 44+ pp. DATE: 10/01/55 ABSTRACT: Gives a discussion of the Arroyo Grande Creek watershed. Report includes discussions of fire hazard, wind erosion, and hydrology. Includes limited data. KEYWORDS: Hydrology & Hydraulics fires, river discharge, watersheds, watershed sediment, wind transport California, South Central Region, Subregion VI, Santa Maria River Cell

Geology of the Ventura Fault, Ventura County, California AUTHOR(S): Sarna-Wojcicki, A. M.; Williams, K. M.; Yerkes, R. F. SOURCE: Misc. Field Studies Map, MF-781, U. S. Dept. of Interior, Geological Survey, Menlo Park, California DATE: 01/01/76 ABSTRACT: Geologic Map Scale 1:6,000 KEYWORDS: Geomorphology geology, geomorphic processes, maps, neotectonics California, South Central Region, Subregion VII, Santa Barbara Cell Sand Bypassing at Port Hueneme, California AUTHOR(S): Savage, R. P. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 92 DATE: 03/01/57 A novel method of bypassing sand from an accreted area ABSTRACT: updrift of a jetty to an eroding downdrift shore. The method involved first the dredging of a large lagoon behind the beach, leaving a barrier to serve as protection for the dredge, and then dredging cuts through the barrier. Results of the operation from periodic surveys after its completion indicate the method to be successful. Modifications are suggested for further similar operations. KEYWORDS: Coastal Processes coastal structures, sand entrapment, beach nourishment/dredging, longshore transport California, South Central Region, Accuracy of Hydrographic Surveying In and Near the Surf Zone AUTHOR(S): Saville, T.; Caldwell, J. M. U. S. Army Corps of Engineers, Beach Erosion Board, Washington, SOURCE: D. C., BEB Tech. Report 32 DATE: 03/01/53 The results of a study to determine on a statistical basis ABSTRACT: the degree of accuracy that can be expected in hydrographic survey work where comparability of successive surveys is a prime consideration. Test surveys to determine the magnititude of sounding error (accuracy with which the deduced profile actually represents the bottom hydrography along the particular range being sounded) and spacing error (accuracy with which the particular profile portrays the characteristics of its assigned section of beach or bottom) were made at Mission Beach, California. KEYWORDS: Coastal Processes, Survey beach profiles, hydrographic surveys California, San Diego Region, Subregion X, Mission Bay Cell

Light Mineral Petrology of Sediments from Santa Monica and San Pedro Bays, California Continental Borderland AUTHOR(S): Savula, N. A. SOURCE: M. S. Thesis, University of Southern California, Los Angeles, California, 56 pp. DATE: 01/01/78 ABSTRACT: Texture and mineralogic data along with statistical information are given for about 30 samples collected from the San Pedro and Santa Monica Bays. KEYWORDS: Geomorphology, Coastal Processes grain size, petrology, sedimentation, littoral sediment California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, San Pedro Cell Stratigraphy and Lithofacies of the Sweetwater and Rosarito Beach Formations. Southwestern San Diego County, Calif., and NW Baja Calif., Mexico AUTHOR(S): Scheidemann, R. C.; Kuper, H. T. SOURCE: In: A Guidebook to Miocene Lithofacies and Depositional Environments, Coastal Southern California and Northwestern Baja Calif., Pac. Section, SEPM, Bakersfield, California, pp. 107-118 DATE: 01/01/79 ABSTRACT: This report describes the lithology of the Sweetwater and Rosarito Beach formations. KEYWORDS: Geomorphology cliff sediment, geology, maps California, San Diego Region, Subregion X, Oceanside Cell Sedimentary Structures in Vibra-Cores from the Oxnard Shelf, California AUTHOR(S): Schen, J. M. M. S. Thesis, University of Southern California, Los Angeles, SOURCE: California, 157 pp. DATE: 06/01/81 ABSTRACT: Nineteen vibra-cores and a grid of high resolution seismic profiles were collected on the inner continental shelf from Point Mugu to Ventura, California. This area has two well-defined shelves, the Ventura Shelf to the north and the Mugu Shelf to the south. They are separated by the Hueneme Submarine Canyon. Radiographs of these cores are used to describe in detail the different sediment structures and their relation to sediment sources, sinks, and submarine physiography. KEYWORDS: Geomorphology, Coastal Processes geology, grain size, littoral sediment California, South Central Region,

Visually Observed Wave Data at Point Mugu, California

AUTHOR(S): Schneider, C.; Weggel, J. R. SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Res. Center, Vicksburg, Miss., CERC Reprint 81-12; and Proc. of 17th Int'l Coastal Engr. Conf., Mar. 23-28, 1980, ASCE, N. Y., pp. 23-28 DATE: 12/01/81 ABSTRACT: Collection of data from 3 LEO sites at Point Muqu from daily visual observations of waves and surf conditions. Comparison of visual observations and measured wave gage records to evaluate the reliability of wave height and periods collected using the LEO techniques. LEO estimates of wave period tended to over- predict the period of maximum energy density. It is presumed that this occurred because observers often fail to count smaller waves when making this measurement. Statistics of the gage measurements of wave height and LEO wave heights are reasonably close. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell Synoptic Weather Types Associated with Critical Fire Weather AUTHOR(S): Schroeder, M. J. SOURCE: U. S. Department Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station, Berkeley, California, 492 pp. DATE: 01/01/64 An analysis of critical fire weather for the United States. ABSTRACT: In particular, Southern and Northern California are discussed. Finds subtropical high aloff, Meridional Ridge-Southwest flow and Santa Ana type. (Great Basin high) are most important for Southern California. Subtropical high blocks moisture from Gulf of Mexico, and is seen 500 mb charts. Santa Ana type (Great Basin high) yields most severe fire weather. Gives details of Santa Ana Conditions. Include data and weather charts (surface 500 mb). KEYWORDS: Oceanography & Meteorology fires California Tree-Ring Hydrology in Southern California AUTHOR(S): Schulman, E. Bulletin No. 4, Laboratory of Tree-Ring Research, University of SOURCE: Arizona, Tucson, Arizona, 36 pp. DATE: 07/01/47 ABSTRACT: Detailed analysis of tree-ring chronologies from trees in Southern California coastal ranges. Includes data KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics climatology, precipitation

California, South Coast Region, San Diego Region A Sediment Budget for the Southern California Continental Borderland AUTHOR(S): Schwalbach, J. R. SOURCE: M. S. Thesis, University of Southern California, Los Angeles, California DATE: 01/01/82 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology sedimentation, geomorphic processes California, South Central Region, South Coast Region, San Diego Region Bedform and Stratification Characteristics of Some Modern Small-Scale Washover Sand Bodies AUTHOR(S): Schwartz, R. K. Sedimentology, Vol. 29, pp. 835-849 SOURCE: DATE: 01/01/82 ABSTRACT: Newly formed, small-scale washover deposits were examined along the Outer Banks, North Carolina, near Point Mugu, California, and at Presque Isle (Lake Erie), Pennsylvania. KEYWORDS: Geomorphology geomorphic processes, littoral sediment, overwash California, South Central Region, Subregion VII, Santa Barbara Cell, S. Santa Barbara Reach Nearshore Currents of the Western United States and Baja California as Measured by Drift Bottles AUTHOR(S): Schwartzlose, R. A. Report 19, Cal COFI, California Coop. Oceanic Fisheries SOURCE: Investigation, Marine Res. Comm., State of California, Sacramento, pp. 15-32 DATE: 01/01/63 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, Oregon, Mexico Nearshore Circulation in the California Current AUTHOR(S): Schwartzlose, R. A.; Reid, J. L. Report No. 16, Cal COFI, California Coop. Oceanic Fisheries SOURCE: Investigation, Marine Res. Comm., State of California, Sacramento, pp. 57-65 DATE: 01/01/72 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California Benthonic Foraminifera of Three Southern California Lagoons: Ecology and Recent Stratigraphy AUTHOR(S): Scott, D. B.; Mudie, P. J.; Bradshaw, J. S.

SOURCE: Journal of Foraminiferal Research, Vol. 6, No. 1, pp. 59-75 DATE: 01/01/76 ABSTRACT: Foraminiferal assemblages found in modern sediments were used to interpret the recent depositional history of Los Penasquitos Lagoon. Six lagoon subenvironments are recognized in the three bore holes: fluvial, salt marsh, intertidal mudflat, inner lagoon, middle to outer lagoon, and open bay or nearshore. KEYWORDS: Geomorphology, Coastal Processes geology, geomorphic processes, river-bed sediment, sedimentation, estuarine sediment storage California, San Diego Region, Subregion X, Oceanside Cell Sedimentation in the Pira Creek Watershed, Southern California AUTHOR(S): Scott, K. M.; Ritter, J. R.; Knott, J. M. SOURCE: Water-Supply Paper No. 1798-E, U. S. Geological Survey, Menlo Park, California, 48 pp. DATE: 01/01/68 ABSTRACT: Estimates of sedimentation in a typical watershed area. Includes climate and precipitation data, fire history, measurements of sedimentation, and effects of dams and debris basins. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology fires, sedimentation, watershed sediment, reservoirs California, South Central Region, Subregion VIII, Santa Barbara Cell Origin and Sedimentology of 1969 Debris Flows Near Glendora, California AUTHOR(S): Scott, K. M. SOURCE: Prof. Paper No. 750-C, U. S. Geological Survey, Washington, D. C., pp. 242-247 DATE: 01/01/71 Analysis of massive debris flows which resulted from 1968 ABSTRACT: fires followed by 1969 heavy rain storms. Includes some general data, measurements, and sediment sizes. KEYWORDS: Hydrology & Hydraulics fires, storms/floods, watershed sediment California, South Coast Region, Subregion IX Erosion and Sediment Yields in Mountain Watersheds of the Transverse Ranges, Ventura and Los Angeles Counties, Calif. - Analysis of Rates AUTHOR(S): Scott, K. M.; Williams, R. P. SOURCE: Water-Resources Investigations No. 47-73, U. S. Geological Survey, Water Resources Division, Menlo Park, California, 66 pp. DATE: 06/01/74 ABSTRACT: Estimates of erosion rates in Ventura County canyons by extrapolation from measurements in similar Los Angeles County canyons. Gives

metholodlogy, geological details of calculations are omitted. Includes other data. KEYWORDS: Hydrology & Hydraulics fires, watershed sediment California, South Central Region, South Coast Region Erosion and Sediment Yields in the Transverse Ranges, Southern California AUTHOR(S): Scott, K. M.; Williams, R. P. SOURCE: U. S. Dept. of Interior, Geological Survey, Washington, D. C., Professional Paper 1030, 38 pp. DATE: 01/01/78 ABSTRACT: Major storm and long term erosion rates are given for 37 debris basins in the Transverse Ranges. The erosion rates are tied into the geologic processes of high rates of tectonic uplift, and soil-rock landslides. KEYWORDS: Geomorphology, Hydrology & Hydraulics geology, geomorphic processes, watershed sediment, neotectonics California, South Central Region, Subregion VII, Santa Barbara Cell Observed Changes in Wave Height from Deep to Shallow Water AUTHOR(S): Scripps Institution of Oceanography SIO Reference Series 45-7, Wave Project Number 27, Scripps SOURCE: Institution of Oceanography, La Jolla, California, 19 pp. DATE: 01/01/45 ABSTRACT: A study of the transformation of waves between the end of the Scripps Institution pier and the point of breaking. Assumptions regarding transformation from deep water to end of the pier are given. KEYWORDS: Coastal Processes wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Longshore Currents AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference Series 45-11, Wave Project Report No. 40, Scripps Institution of Oceanography, La Jolla, California, 18 pp. DATE: 01/01/45 ABSTRACT: Discussion of longshore currents set-up within the breaker zone by the energy of the breaking waves. This study has been confined to currents along straight beaches with parallel contours, using the most nearly straight beach at Oceanside, California. Results from data on currents are discussed and documented. KEYWORDS: Coastal Processes longshore current, wave transformation, wave climate California, San Diego Region, Subregion X, Oceanside Cell Effect of Wave Refraction on Breaker Heights - A Comparison Between Computed and Observed Changes Along the Beach to the North of La Jolla

AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference Series 45-12, Wave Project Report No. 38, Scripps Institution of Oceanography, La Jolla, California, 27 pp. DATE: 01/01/45 ABSTRACT: Extreme variations in breaker height along the beach between Scripps Institution and La Jolla Beach Club can be associated with the complex local bottom topography and the orientation of the coast line. Refraction programs were prepared for six typical swell periods and directions. Changes in wave height computed from the refraction diagrams compare favorably to the corresponding changes observed. This is the first critical test of the methods used in forecasting variations of breakers and surf due to bottom topography. KEYWORDS: Coastal Processes beach profiles, wave climate, wave transformation, hydrographic surveys California, San Diego Region, Subregion X, Oceanside Cell Forecasting Longshore Currents AUTHOR(S): Scripps Institution of Oceanography SIO Reference Series No. 45-16, Wave Project Report No. 46, SOURCE: Scripps Institution of Oceanography, La Jolla, California, 9 pp. DATE: 01/01/45 The longshore currents measured and discussed in this report ABSTRACT: are those set up within the breaker zone by the breaking waves on the beach at Oceanside, California. KEYWORDS: Coastal Processes longshore current, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell The Effect of Refraction on Wave Height AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference Series No. 45-19, Wave Project Report No. 51, Scripps Institution of Oceanography, La Jolla, California, 6 pp. DATE: 01/01/45 ABSTRACT: Report includes results of wave refraction studies on the beach near Scripps Institution. KEYWORDS: Coastal Processes beach profiles, wave climate, wave transformation, hydrographic surveys California, San Diego Region, Subregion X, Oceanside Cell A Statistical Study of Wave Conditions at Four Open Sea Localities in the North Pacific AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference Series 46-1, Wave Project Report No. 53, Scripps Institution of Oceanography, La Jolla, California, 26 pp. DATE: 01/01/46

ABSTRACT: A study of wave conditions in the Pacific. Daily computations were carried out for each of four selected localities for the three-year period 1936-1938, forming the basis for the summaries of wave conditions which appear in this report. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Beaches and Wave Action AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference Series 46-4, Wave Project Report No. 56, Scripps Institution of Oceanography, La Jolla, California, 13 pp. DATE: 01/01/46 ABSTRACT: This report covers repeated measurements of beach profiles carried out between July 1945 and February 1946. Work included collection and study of beach sands, sources of sand, and cliff retreat in relation to beach change. Most of the work was conducted within 40 miles of Scripps, with emphasis on the beach that extends south of the Institution. KEYWORDS: Coastal Processes, Geomorphology cliff sediment, beach profiles, longshore current, littoral sediment, offshore/onshore transport, wave climate California, San Diego Region, Subregion X, Oceanside Cell A Statistical Study of Wave Conditions at Five Open Sea Localities Along the California Coast AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference Series 47-9, Wave Report No. 68, Scripps Institution of Oceanography, La Jolla, California, 132 pp. DATE: 07/01/47 ABSTRACT: A study of the characteristics of ocean waves off the California coast. Wave data were derived by an examination of the wind systems of the North Pacific over a three-year period, 1936-1938, and daily weather maps at 5 stations. Representation of average wave conditions is included. One comparison is made between the wave characteristics as derived from weather maps and the observed wave characteristics at a coastal station. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation, wind, climatology California Tsunami Times to La Jolla AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference Series 48-12, Wave Report No. 83, Scripps Institution of

Oceanography, La Jolla, California, 12 pp.

DATE: 01/01/48 ABSTRACT: Tsunami travel times are given. KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell, S. Oceanside Reach Refraction of Long Swell Off La Jolla AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference Series No. 48-13, Wave Report No. 84, Scripps Institution of Oceanography, La Jolla, California, 24 pp. DATE: 01/01/48 ABSTRACT: Refraction information is presented covering swells of 18, 22, 26, and 30 seconds, based on refraction diagrams constructed for deep water source directions. Principal results are presented. KEYWORDS: Coastal Processes wave climate, wave transformation, hydrographic surveys California, San Diego Region, Subregion X, Oceanside Cell, S. Oceanside Reach Results of Current Measurements with Drogues, 1958-1961 AUTHOR(S): Scripps Institution of Oceanography SIO Reference Series 62-27, Scripps Institution of SOURCE: Oceanography, La Jolla, California, 64 pp. DATE: 12/01/62 ABSTRACT: Details the results of hitherto unpublished drogue surveys of the California current conducted from March 1958 through 1961. There is no uniform pattern to any of the drogue surveys. Charts of movement and tables of positions are presented. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, South Central Region, South Coast Region, San Diego Region Mechanics of Sediment Transport by Waves and Currents, Quarterly Report No. 9, October 1 - December 31, 1967 AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference Series 68-5, Contract DA-49-055-CIVENG-66-1, Mod. 2, Scripps Institution of Oceanography, La Jolla, California, 18 pp. DATE: 12/31/67 First progress report of the second phase of a continuing ABSTRACT: study initiated in 1963 for CERC. The continuing study will utilize sensors and techniques developed during the past 4 years to obtain: reliable measurements of the relation between sand transport and wave action on natural beaches; improved relation for prediction of longshore currents; and a clearer understanding of the processes by which waves break and form bores.

KEYWORDS: Coastal Processes beaches, longshore current, longshore transport, California, San Diego Region, Subregion X, Oceanside Cell, Silver Strand Cell Mechanics of Sediment Transport by Waves and Currents, Quarterly Progress Report No. 10, January 1 - March 30, 1968 AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference 68-10, Contract DA-49-055-CIVENG-66-1, Mod. 2, Scripps Institution of Oceanography, La Jolla, California, 5 pp. DATE: 01/01/68 ABSTRACT: Research efforts are directed primarily towards processing data collected in the field last summer and fall, and comparing with laboratory experiments. The field data include measurement of the relation between the character and energy of waves, and 1) the longshore transport of sand, 2) the generation of longshore currents, and 3) the shoaling and breaking of waves and the resulting set-up and run-up on the beach. KEYWORDS: Coastal Processes beaches, longshore current, longshore transport, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell, Mission Bay Cell. Silver Strand Cell Mechanics of Sediment Transport by Waves and Currents, Quarterly Progress Report No. 11, April 1 - June 30, 1968 AUTHOR(S): Scripps Institution of Oceanography SIO Reference 68-26, Contract DA 49-055-CIVENG-66-1, Mod. 2, SOURCE: Scripps Institution of Oceanography, La Jolla, California, 8 pp. DATE: 01/01/68 ABSTRACT: Emphasizes the field measurement of sand transport and wave set-up and run-up along the barrier beaches of the Gulf of California, Scripps Beach. Silver Strand Beach, and Mission Bay. KEYWORDS: Coastal Processes beaches, longshore transport, wave climate, wave transformation California, Mexico, San Diego Region, Subregion X, Oceanside Cell, Mission Bay Cell, Silver Strand Cell Dispersion of Water and Sediment in the Surf Zone, Progress Report No. 4 AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference Series 68-27, Std. Agreement 12-24 Amendment No. l with California State Water Resources Control Board, Scripps Institution of Oceanography, La Jolla, California, 2 pp.

DATE: 01/01/68

ABSTRACT: Silver Strand Beach wave and sand transport rate data for the study period. KEYWORDS: Coastal Processes beaches, longshore transport, wave climate, wave transformation California, San Diego Region, Subregion X, Silver Strand Cell Mechanics of Sediment Transport by Waves and Currents, Quarterly Progress Report No. 12 AUTHOR(S): Scripps Institution of Oceanography SIO Reference 68-36, Contract DA 49-055-CIVENG-66-1, Mod. 2, SOURCE: Scripps Institution of Oceanography, La Jolla, California, 6 pp. DATE: 01/01/68 ABSTRACT: Research was directed toward field measurement of 1) wave set-up and run-up, 2) nearshore circulation and mixing, 3) longshore transport of sand, and 4) comparison of various methods of estimating the energy of real waves. Wave set-up and run-up were measured at Scripps Beach and Silver Strand Beach, including measurements of sand transport. KEYWORDS: Coastal Processes beaches, longshore transport, nearshore currents, wave climate, wave transformation California, San Diego Region, Subregion X, Mechanics of Sediment Transport by Waves and Currents, Quarterly Progress Report No. 15, March 31 - June 30, 1969 AUTHOR(S): Scripps Institution of Oceanography SIO Reference 69-12, Contract DA-49-055-CIVENG-66-1, Mod. 2, SOURCE: Scripps Institution of Oceanography, La Jolla, California, 7 pp. DATE: 01/01/69 ABSTRACT: Analysis of data measured in the field and lab during the past year. Field research was carried out at Scripps Beach through August and included measurements of sand movement due to wave action, the spectra of shoaling waves. and wave set-up and run-up. KEYWORDS: Coastal Processes beaches, longshore transport, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Mechanics of Sediment Transport by Waves and Currents, Quarterly Report No. 2, January 1 - March 31, 1970 AUTHOR(S): Scripps Institution of Oceanography SOURCE: SIO Reference Series No. 70-17, Contract DACW 72-69-C-0030, Scripps Institution of Oceanography, La Jolla, California, 7 pp. DATE: 01/01/70 ABSTRACT: Further investigations of shoaling transformation of ocean waves and

the formation of beat waves, and nearshore circulation and prediction of the spacing of rip currents. Analysis of field data obtained in the previous fall from El Moreno and Scripps Beaches is presented. KEYWORDS: Coastal Processes beaches, nearshore currents, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Mechanics of Sediment Transport by Waves and Currents, Quarterly Progress Report No. 4, June 30 - September 30, 1970 AUTHOR(S): Scripps Institution of Oceanography SIO Reference No. 70-33, Contract DACW 72-69-C-0030, Scripps SOURCE: Institution of Oceanography, La Jolla, California, 5 pp. DATE: 01/01/70 ABSTRACT: Research included measurement of the mixing of water in the surf zone at Scripps Beach, completion of a model for the prediction of rip current spacing using edge wave theory, and completion of measurements of wave direction in the hydraulics laboratory. KEYWORDS: Coastal Processes nearshore currents, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell, Silver Strand Cell El Nino AUTHOR(S): Scripps Institution of Oceanography SOURCE: Annual Report 1984, Vol. 18, No. 1, K. K. Kuhns, Ed., University of California at San Diego, La Jolla, California, pp. 4-7 DATE: 01/01/85 ABSTRACT: Summarizes the conditions leading up to the 1982-1983 El Nino phenomenon and discusses the current, wave, and kelp data collection activities undertaken by Scripps Institution of Oceanography during the El Nino event. KEYWORDS: Coastal Processes, Oceanography & Meteorology tides, climatology, wave climate, El Nino, storms/floods, storm waves California, South Central Region, South Coast Region, San Diego Region Climatology of Monthly Precipitation Patterns in the Western United States, 1931-1966 AUTHOR(S): Sellers, W. D. Monthly Weather Review, Vol. 96, No. 9, pp. 585-595 SOURCE: DATE: 09/01/68 ABSTRACT: Determines predominant precipitation patterns in the western United States by determining orthonormal eigenvectors. Gives results in graphical form; finds areas with statistical relationships as regards precipitation. KEYWORDS: Oceanography & Meteorology precipitation California

Forecasting the Weather - the Santa Ana AUTHOR(S): Sergius, L. A. SOURCE: Weatherwise, Vol. 5, No. 3, pp. 66-68 DATE: 06/01/52 ABSTRACT: Description of streamlines, isovels and pressure charts for Santa Ana wind conditions. Gives tables of frequencies by month and discusses difficulties in forecasting Santa Ana conditions. KEYWORDS: Oceanography & Meteorology climatology, wind California, South Central Region, South Coast Region, San Diego Region A Study of Physical Parameters in Coastal Waters Off San Onofre, California, Final Report AUTHOR(S): Severance, R. W.; Winant, C. D.; Davis, R. E. SIO Reference Series No. 78-22, Scripps Institution of SOURCE: Oceanography, La Jolla, California, 19 pp. DATE: 06/01/78 About 1.5 years of ocean current and temperature data have ABSTRACT: been collected from a shallow and deep station off San Onofre. The data are presented as plots and are available on magnetic tape. Drogue studies were conducted and are presented as plots. A wave climate system has provided data for which wave energy and direction can be estimated for the coastal area near San Onofre. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, wave climate, wave transformation, nearshore currents California, San Diego Region, Subregion X, Oceanside Cell Coastal Engineering Data Network, First Semi-Annual Report, December 1975 -June 1976 AUTHOR(S): Seymour, R. J.; Sessions, M. H.; Wald, S. L.; Woods, A. E. SOURCE: IMR Reference 76-11, University of California Institution of Marine Resources, La Jolla, California, Sea Grant Publication No. 50, 125 pp. DATE: 07/01/76 ABSTRACT: The network in this project is specifically designed to meet the needs of California. Primary objective of the system is to provide an affordable means of gathering directional wave statistics at least twice per day from closely-placed stations along the coast of California. Selected stations will allow both a characterization of the wave climate along the entire coastline and will highlight areas of special interest. Statistics will be available to users in a timely manner. Data will be archived so that raw data tapes and spectra tapes can KEYWORDS: Coastal Processes

wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Coastal Engineering Data Network, Second Semi-Annual Report, July 1976 -December 1976 AUTHOR(S): Seymour, R. J.; Sessions, M. H.; Wald, S. L.; Woods, A. E. SOURCE: IMR Reference 77-103, University of California Institute of Marine Resources, La Jolla, California, Sea Grant Publication 56 146 pp. DATE: 04/01/77 ABSTRACT: The report describes and summarizes wave data for this period. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region California Coastal Engineering Data Network, Second Annual Report, January 1977 through December 1977 AUTHOR(S): Seymour, R. J.; Higgins, A. L.; Wald, S. L.; Woods, A.E. SOURCE: California State Department of Navigation and Ocean Development, Sacramento, and Scripps Institution of Oceanography, La Jolla, California, 123 pp. DATE: 04/01/78 ABSTRACT: Report describes and summarizes the second year of operation of the California Coastal Engineering Data Network. Describes basic configurations of the system. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Deepwater Wave Direction From an Intensity Array AUTHOR(S): Seymour, R. J.; Higgins, A. L. In: Proceedings of 16th Coastal Engineering Conference, August SOURCE: 27-September 3, 1978, Hamburg, Germany; ASCE, N. Y., pp. 305-311 DATE: 01/01/79 ABSTRACT: Details of the relationship between deepwater directional spectrum and nearshore energy spectra are discussed. Intensity array data are applied to detection of waves incident within a narrow directional interval. Describes the application of an intensity array to detection of long period southern swell in San Diego, California. Comments regarding relative merits of method used are included. The four-gage intensity array used is in the County of San Diego at Oceanside, La Jolla, Ocean Beach and Imperial Beaches. KEYWORDS: Coastal Processes wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell, Mission Bay Cell,

California Coastal Engineering Data Network, Third Annual Report January 1978 through December 1978 AUTHOR(S): Seymour, R. J.; Castel, D.; Sessions, M.; Woods, A. E. SOURCE: California State Department of Boating and Waterways, Sacramento, and Scripps Institution of Oceanography, La Jolla, California, 105 pp. DATE: 04/01/79 ABSTRACT: The report describes and summarizes wave data for this period. Five additional stations are added or modified. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region California Coastal Data Collection Program, Fourth Annual Report, January 1979 through December 1979 AUTHOR(S): Seymour, R. J.; Thomas, J. O.; Castel, D.; Woods, A. E. IMR Reference No. 80-4, California State Department of Boating SOURCE: and Waterways, Sacramento, and Scripps Institution of Oceanography, La Jolla, California, 121 pp. DATE: 04/01/80 ABSTRACT: Data collection and analysis. Efforts and objectives success- fully met during the period: 1) central station capability up-graded to allow for addition of stations; 2) capability to increase number of data runs; 3) created capability to receive and display data remotely; 4) developed hardware and software for data analysis; 5) enabled receipt of data from GOES satellite downlink in Washington, D. C.; and 6) installed hardware for automatic transfer of analyzed data to other computers. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region The Nearshore Sediment Transport Study AUTHOR(S): Seymour, R. J. SOURCE: Sea Grant Report No. NOAA 81012804, pre-print No. 80-555, Amer. Soc. Civil Engineers Convention and Exposition, Florida, October 27-31, 1980, ll pp. DATE: 10/01/80 ABSTRACT: The study program was planned as a field experiment program with minimal emphasis on laboratory and numerical modelling. The first field experiment was held at Torrey Pines Beach, California in November 1978. For 20 days an intense measurement program aimed at defining surf zone dynamics was

Silver Strand Cell

undertaken. A second field experiment involved the harbor configuration at Santa Barbara, California which offers an extremely effective trap for longshore transport and provides an opportunity to acquire a very high quality data set on longshore transport. KEYWORDS: Coastal Processes longshore transport, wave climate, California, South Central Region, San Diego Region, Subregion VII, Subregion X, Santa Barbara Cell, Oceanside Cell California Coastal Data Collection Program, Fifth Annual Report, January 1980 through December 1980 AUTHOR(S): Seymour, R. J.; et al. IMR Reference No. 80-6, California State Department of Boating SOURCE: and Waterways, Sacramento, and Scripps Institution of Oceanography, La Jolla, California, 148 pp. DATE: 04/01/81 ABSTRACT: Data collection and analysis. Several stations were added or modified. Software developed for user accessibility (NWS). Software developed to improve and expedite detection of problems within the system. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Coastal Data Information Program, Sixth Annual Report, January 1981 through December 1981 AUTHOR(S): Seymour, R. J.; et al. SOURCE: IMR Reference No. 81-3, California State Department of Boating and Waterways, Sacramento, and Scripps Institution of Oceanography, La Jolla, California, 190 pp. DATE: 04/01/82 ABSTRACT: Wave data collection and analysis. Summarizes addition of stations, modifications, and removal. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Field Comparisons of Cross-Shore Transport Models AUTHOR(S): Seymour, R. J.; King, D. B. SOURCE: Journal of Waterway, Port, Coastal, and Ocean Engineering, ASCE, N. Y., Vol. 108, No. WW2, pp. 163-179 DATE: 05/01/82 ABSTRACT: During the Nearshore Sediment Transport Study experiments at Torrev Pines Beach, California in November 1978, beach profiles were measured over a

several-week period concurrent with extensive daily measurements of wind, waves, and currents. These surf data were used to predict the cross-shore transport of sand using eight models available in the literature. Several models were found to have skill in predicting major changes, but none were capable of predicting more than a third of the total beach volume variability. KEYWORDS: Coastal Processes beach profiles, longshore current, longshore transport, offshore/onshore transport, wave climate, California, San Diego Region, Subregion X, Oceanside Cell Analysis of Extreme Wave Statistics, Mission Bay Entrance, January 3, 1976 to October 29, 1982 AUTHOR(S): Seymour, R. J. SOURCE: Nearshore Research Group, Institute of Marine Resources, Scripps Institution of Oceanography, La Jolla, California, 5 pp. DATE: 10/29/82 ABSTRACT: Statistical analyses to facilitate an estimate of the probability of occurrence of extreme wave heights at Mission Bay entrance based on measured wave data at that location. Includes data summary. KEYWORDS: Coastal Processes wave climate, wave transformation California, San Diego Region, Subregion X, Mission Bay Cell The Nearshore Sediment Transport Study AUTHOR(S): Seymour, R. J. SOURCE: Journal of Waterway, Port, Coastal and Ocean Engineering, Vol. 109, No. 1, pp. 79-85; and discussion and closure, Feb. 84, Vol. 110, No. 1, pp. 130-133 DATE: 02/01/83 ABSTRACT: A six-year program was undertaken by the Office of Sea Grant in 1976 to develop improved engineering predictive models for transport of sediment in and near the surf zone by waves and currents. The project, called the Nearshore Sediment Transport Study has involved ten investigators from six different institutions. Three major field experiments were conducted from 1978-1981. The first two had a duration of approximately a month and involved synoptic measurements of more than 100 parameters of surf zone dynamics and sediment response. Sand tracer experiments were also performed and the last two field sites include concurrent trap experiments for longshore KEYWORDS: Coastal Processes

beach profiles, littoral sediment, longshore transport, longshore current, wave climate, wave transformation California, South Central Region, San Diego Region, Subregion VII, Subregion X, Santa Barbara Cell, Oceanside Cell Coastal Data Information Program, Seventh Annual Report, January 1982 through December 1982 AUTHOR(S): Seymour, R. J.; et al. Sponsored by: U. S. Army Corps of Engrs., and Calif. State SOURCE: Dept. of Boating and Waterways, IMR Reference No. 82-8, Scripps Inst. of Oceanography, La Jolla, Calif., 268 pp. DATE: 04/01/83 ABSTRACT: Wave data collection and analyses. A number of stations added to network, modified, or removed. Directional wave measuring stations covered in this report include Santa Barbara, Sunset Beach, and Mission Bay. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Extreme Waves in California During Winter, 1983 AUTHOR(S): Seymour, R. J. SOURCE: State of California Department of Boating and Waterways, Sacramento, California, 17 pp. DATE: 04/21/83 ABSTRACT: Storm and wave data from January - March 1983, assessing severity of waves compared to other winter seasons. Fourteen wave measuring stations along California coastline provided the data, eight in the Southern California area. KEYWORDS: Coastal Processes storms/floods, storm waves, wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Episodicity in Longshore Sediment Transport AUTHOR(S): Seymour, R. J.; Castel, D. In press, 23 pp. SOURCE: DATE: 01/01/84 ABSTRACT: Seven West Coast sites were selected. Each had one to three vears nearshore directional wave measurements several times per day during the period 1979-1982. Investigations were made on frequency and cumulative distributions of transport, and from these, a number of statistics, characterizing the dearee of episodic transport, was generated. The transport was found to be very episodic. Inferences were made concerning the design requirements for sand

bypass. Systems were drawn from the statistics of episodicity. KEYWORDS: Coastal Processes beaches, littoral sediment, longshore transport, wave climate, wave transformation California, South Central Region, Coastal Data Information Program, Eighth Annual Report, January 1983 through December 1983 AUTHOR(S): Seymour, R. J.; et al. SOURCE: Spons. by: Calif. State Dept. of Boating and Waterways, and U.S. Army Corps of Engrs.; Scripps Institution of Oceanography, La Jolla, California, 207 pp. DATE: 04/01/84 Wave data collection, analyses, and summaries. During the ABSTRACT: period covered, a number of stations were added, removed, or failed. Report also contains condensed wave statistics from along the coasts of Hawaii, California, Oregon, Washington, and North Carolina. Contains a report on potential sand transport statistics from directional wave array stations along coasts of California and Washington. KEYWORDS: Coastal Processes longshore transport, wave climate, wave transformation California, Oregon, South Central Region, South Coast Region, San Diego Region A Historical Evaluation of North Pacific Storms During the Winter of 1983 AUTHOR(S): Seymour, R. J.; Castel, D. SOURCE: Abstracts of 19th International Conference on Coastal Engineering, Sept. 3-7, 1984, Houston, Texas, ASCE, N. Y., pp. 344-345 DATE: 09/01/84 ABSTRACT: The intensity and number of storms in the North Pacific Basin January to March 1983, their apparently anomalous direction of approach and their very long periods, have evoked considerable interest as a climatic event. The article looks at the historical record for this century and assesses the likelihood that such a sequence will be repeated in the future. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, storms/floods, storm waves, wave climate, El Nino, wave transformation California, Oregon, Mexico Influence of El Ninos on California's Wave Climate AUTHOR(S): Seymour, R. J.; Strange, R. R.; Cayan, D. R.; Nathan, R. A. SOURCE: 19th International Conference on Coastal Engineering, Houston, Texas, Sept. 3-7, 1984, ASCE, N. Y., 16 pp.

DATE: 09/01/84

ABSTRACT: A determination if the extreme waves that caused severe damage along coast of California in 1982-83 resulted from the El Nino-Southern Oscillation (ENSO) climate anomaly or its related features. Time series 1900-1984 was used. It was determined that ENSO winters are responsible for producing all of the significant wave events in this study. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, storm waves, wave climate, wave transformation, El Nino, storms/floods California, South Central Region, South Coast Region, San Diego Region Coastal Data Information Program - Ninth Annual Report, January 1984 -December, 1984 AUTHOR(S): Seymour, R. J.; et al. Sponsored by: U. S. Army Corps of Engineers and California SOURCE: Dept. of Boating and Waterways; IMR Reference No. 84-5, Scripps Institution of Oceanography, La Jolla, California, 161 pp. DATE: 01/01/85 ABSTRACT: This annual report contains condensed wave statistics for calendar year 1984 from wave gages and buoys primarily along the Pacific Coast. Also reports on the potential longshore transport statistics derived from directional wave gages located along the California, Oregon, and Washington coasts. Includes: Imperial Beach, Scripps Pier, Del Mar, Oceanside Beach, San Clemente, Begg Rock, Santa Cruz Island, and Diablo Canyon stations. KEYWORDS: Coastal Processes longshore current, longshore transport, California, South Central Region, South Coast Region, San Diego Region Artificial Sediment Transport and Structures in Coastal Southern California AUTHOR(S): Shaw, M. J. SOURCE: SIO Reference Series No. 80-41, Shore Processes Lab., Center for Coastal Studies, Scripps Institution of Oceanography, La Jolla, California, 109 pp. DATE: 12/01/80 ABSTRACT: An annotated inventory of the sequence of events which modified the coastline of Southern California. Data collected for all major activities involving intervention of the natural sediment transport along the coast from Point Conception to the Mexican border. Includes data on location, quantity and date of dredging, beach fill activity, and maps. Information is updated to January 1980. KEYWORDS: Coastal Processes

beach nourishment/dredging, coastal structures, littoral sediment, longshore transport, shoreline changes California, South Central Region, South Coast Region, San Diego Region Coastal Response of Leadbetter Beach, Santa Barbara, to Southern California Storm of February 16-21, 1980 AUTHOR(S): Shaw, M. J. SOURCE: In: Storms, Floods and Debris Flows in South. Calif. and Ariz., 1978-80, Proc. of Symp. Sept. 17-18, 1980; Nat'l Res. Council and C.I.T., National Academy Press, Wash. D. C., pp. 437-452 DATE: 01/01/82 ABSTRACT: Describes storm effects including sand accretion in Santa Barbara Harbor and sand transport to offshore bars. Gives data from beach survey. KEYWORDS: Coastal Processes coastal erosion, longshore transport, offshore/onshore transport, beach profiles, storm damage, sand entrapment California, South Central Region, Subregion VII, Santa Barbara Cell A History of Tropical Cyclones in the Central North Pacific and Hawaiian Islands 1832-1979 AUTHOR(S): Shaw, S. S. SOURCE: U. S. Department of Commerce, NOAA, NWS Report, 137 pp. DATE: 09/01/81 ABSTRACT: Gives an historical account of Central Pacific hurricanes 1832 through 1979. Finds correlation with El Nino. Gives intensities, storm tracks, written observations as well as tables of frequencies. KEYWORDS: Oceanography & Meteorology El Nino, storms/floods California Rainfall in Southern California AUTHOR(S): Sheely, M. J.; Dorman, C. E. SOURCE: Weatherwise, Vol. 32, No. 3, pp. 119-122 DATE: 06/01/79 ABSTRACT: Relates Southern California rainfall to South Pacific Ocean changes and Pacific Ocean weather. In particular, relates rain- fall to pressure gradient anomalies. Shows that North Pacific east-west pressure gradient is correlated with east-west South Pacific gradient, and that South Pacific gradient is correlated with rainfall in Southern California. KEYWORDS: Oceanography & Meteorology precipitation, climatology California, South Central Region, South Coast Region, San Diego Region Submarine Geology by Diving Saucer AUTHOR(S): Shepard, F. J.; et al. SOURCE: Science, Vol. 145, No. 3636, pp. 1042-1046 DATE: 09/04/64 Eight dives into Scripps and La Jolla Canyons. ABSTRACT: KEYWORDS: Coastal Processes, Geomorphology

geology, submarine canyons, hydrographic surveys California, San Diego Region, Subregion X, Oceanside Cell Sediments of the Continental Shelves AUTHOR(S): Shepard, F. P. SOURCE: Geologic Society of America Bulletin, Vol. 43, pp. 1017-1040 DATE: 01/01/32 ABSTRACT: Reconnaissance study of the sediments on the continental shelves using data from various hydrographic charts. KEYWORDS: Geomorphology, Coastal Processes geomorphic processes, grain size, littoral sediment, hydrographic surveys, geology California, South Central Region, South Coast Region, San Diego Region Sediments of Santa Monica Bay AUTHOR(S): Shepard, F. P.; MacDonald, G. A. SOURCE: American Association of Petr. Geol. Bulletin, Vol. 22, pp. 201-216 DATE: 01/01/38 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology sedimentation, littoral sediment California, South Coast Region, Subregion VIII, Santa Monica Cell Submarine Topography Off the California Coast: Canyons and Tectonic Interpretations AUTHOR(S): Shepard, F. P.; Emery, K. O. SOURCE: Spec. Paper, Geological Society of America, Vol. 31, 171 pp. DATE: 01/01/41 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology hydrographic surveys, neotectonics, submarine canyons California, South Central Region, South Coast Region, San Diego Region Wave Erosion Along the Southern California Coast AUTHOR(S): Shepard, F. P.; Grant, U. S. SOURCE: Geol. Soc. of Amer. Bulletin, Vol. 58, pp. 919-926 DATE: 01/01/47 not reviewed ABSTRACT: KEYWORDS: Coastal Processes, Geomorphology coastal erosion, shoreline changes California, South Central Region, South Coast Region, San Diego Region Longshore Current Observations in Southern California AUTHOR(S): Shepard, F. P. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 13 DATE: 01/01/50 ABSTRACT: Currents were measured in the surf zone at frequent intervals for a year along the Southern California coast. Study shows the dominant currents in the area from Newport Beach to the Mexican border. North currents prevail

during a large part of summer and fall. Strong longshore currents exist even during times when large waves approach from directions essentially normal to the beaches. KEYWORDS: Coastal Processes wave climate, wave transformation, longshore current California, South Coast Region, San Diego Region, Subregion IX, Subregion Х Longshore Bars and Longshore Troughs AUTHOR(S): Shepard, F. P. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo 15 DATE: 01/01/50 Submerged longshore bars and longshore troughs which skirt ABSTRACT: the shores off most sandy beaches are described and explained. The depths of the bars and troughs are shown to be related to wave and breaker heights. Analyses of hundreds of profiles taken mostly on the West Coast of the U.S. are the chief basis for conclusions. KEYWORDS: Coastal Processes beach profiles, longshore transport, offshore/onshore transport, wave climate. wave transformation, sand bars California, Oregon, Mexico, South Central Region, South Coast Region, San Diego Region Nearshore Water Circulation Related to Bottom Topography and Wave Refraction AUTHOR(S): Shepard, F. P.; Inman, D. L. SOURCE: Transactions, American Geophysical Union, Vol. 31, No. 2, pp. 196-212 DATE: 04/01/50 ABSTRACT: Nearshore circulation in the vicinity of Scripps Beach was measured and found to be controlled to a large degree by the wave convergence and divergence resulting from the diversified submarine relief outside this gently curving shoreline. The position of rip currents is similarly related to the points of wave convergence and divergence. The existence of strong longshore currents flowing against the direction of wave approach is established. The development of large eddies with vertical axes is discussed. Also the pulsating nature of outflowing rip currents was found to be related to alternating groups of high and low breakers. KEYWORDS: Coastal Processes hydrographic surveys, longshore current, nearshore currents, wave

transformation, wave climate California, San Diego Region, Subregion X, Oceanside Cell Beach Cycles in Southern California AUTHOR(S): Shepard, F. P. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington D. C., BEB Tech. Memo 20, 26 pp. DATE: 07/01/50 ABSTRACT: From a mass of records and data accumulated on California beaches, salient features observed are discussed and their interpretation attempted. Features discussed include seasonal changes both offshore-onshore and lateral movement, long-term trends, changes associated with engineering structures, and relationship of permanent and temporary losses. KEYWORDS: Coastal Processes coastal structures, littoral sediment, longshore transport, offshore/onshore transport, beaches, beach nourishment/dredging California, South Central Region, South Coast Region, San Diego Region Contour Charts in the San Diego Area AUTHOR(S): Shepard, F. P. SOURCE: SIO Reference Series 50-20, Submarine Geology Report No. 13, Scripps Institution of Oceanography, La Jolla, California, 20 pp. DATE: 08/01/50 ABSTRACT: Contour charts which cover the offshore San Diego area between La Jolla and Los Coronados Islands are presented. These show the character of La Jolla and Coronado Submarine Canyons in much more detail than was formerly available, and present a detailed topography of the canyons and of San Diego Trough. These charts show the outer extensions of the two canyons into San Diego Trough. KEYWORDS: Coastal Processes, Geomorphology, Survey hydrographic surveys, maps, submarine canyons California, Mexico, San Diego Region, Subregion X Mass Movements in Submarine Canyon Heads AUTHOR(S): Shepard, F. P. SOURCE: SIO Reference Series 51-26, Scripps Institution of Oceanography, La Jolla, California; and Transactions, American Geophysical Union, Vol. 32, No. 3, pp. 405-418 DATE: 06/01/51 ABSTRACT: The repetition of sounding profiles along precise ranges at the heads of the submarine canyons in the La Jolla area has given a sequence of

depth changes during the past three years to a maximum of 21 feet. Changes have taken place and material is being moved and carried out of the gorges probably to the mouth of the canyon, which is thought to trap a large portion of the sand that is carried along the shore by currents. KEYWORDS: Coastal Processes, Geomorphology littoral sediment, offshore/onshore transport, submarine canyons, longshore transport California, San Diego Region, Subregion X, Sand Movement on the Shallow Inter-Canyon Shelf at La Jolla, California AUTHOR(S): Shepard, F. P.; Inman, D. L. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Tech. Memo No. 26, 29 pp. DATE: 11/01/51 ABSTRACT: The nature of change in sand level of a beach and shallow shelf area between two submarine canyon heads is indicated by eight repeated surveys accompanied by five sampling operations, which are believed to establish significant changes out to depths of at least 100 feet. Wave observations and refraction analyses are included. Sand level changes between surveys are plotted and sand movement over the shelf is analyzed. KEYWORDS: Coastal Processes beaches, offshore/onshore transport, submarine canyons, wave climate, longshore transport, littoral sediment California, San Diego Region, Subregion X, Oceanside Cell Nearshore Circulation AUTHOR(S): Shepard, F. P.; Inman, D. L. In: Proc. of First Conf. on Coastal Engr., Long Beach, Calif., SOURCE: Chapter 5, pp. 50-59; and SIO Ref. Series 51-53, Sub. Geol. Rpt. No. 14, Scripps Inst. of Oceanography, La Jolla, Calif., 12 pp. DATE: 12/01/51 ABSTRACT: Studies of nearshore circulation were begun during World War II. Field observations were initiated in 1945 to study nearshore currents in relation to a variety of coastal types and submarine configurations. Operations extending over a period of one year involved measurement of currents inside the breakers at 63 stations from Newport, California to Mexican border. Effects of jetties, piers, and points were investigated. Currents inside and outside the breaker zone were investigated. KEYWORDS: Coastal Processes coastal structures, longshore current, nearshore currents, submarine canyons

California, South Coast Region, San Diego Region, Subregion IX, Subregion Х Transportation of Sand Into Deep Water AUTHOR(S): Shepard, F. P. SOURCE: SIO Reference 52-17, Scripps Inst. of Oceanography, La Jolla, California, Reprinted from Soc. of Economic Paleontologists and Mineralogists Special Publication No. 2, Nov. 1951, pp. 53-65 DATE: 04/15/52 ABSTRACT: The nature of sand layers between typical deep water deposits suggests rapid emplacement by some type of flow, presumably turbidity currents. The sand appears to be carried seaward along the axes of submarine canyons, the currents being generated by landslides at the heads of submarine canyons. No evidence has been found to indicate that these flows are capable of cutting the rock gorges of the canyons. Artificial production of slides was unsuccessful. KEYWORDS: Coastal Processes, Geomorphology offshore/onshore transport, submarine canyons, sedimentation California, South Central Region, South Coast Region, San Diego Region Longshore and Coastal Currents at Scripps Institution Pier AUTHOR(S): Shepard, F. P.; Sayer, D. B. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., BEB Bulletin, Vol. 7, No. 1 DATE: 01/01/53 Current direction and velocity were measured at three ABSTRACT: locations along the 1000-foot pier at Scripps Institution of Oceanography at La Jolla, California. Measurements were made inside the breakers, just outside the breakers, and at the end of the pier; wind, wave, and weather conditions were recorded. KEYWORDS: Coastal Processes nearshore currents, wave transformation, wind, longshore transport, wave climate California, San Diego Region, Subregion X, Oceanside Cell Distinguishing Between Beach and Dune Sands AUTHOR(S): Shepard, F. P.; Young, R. Journal of Sedimentary Petrology, Vol. 31, No. 2, pp. 196-214 SOURCE: DATE: 06/01/61 Roundness, percent silt, phi median diameter, sorting, ABSTRACT: skewness, and Kurtosis data values are given for beach and dune sands collected at Morro Bay, Pismo Beach, La Jolla, and Coronado California. KEYWORDS: Geomorphology, Coastal Processes dunes, geomorphic processes, grain size, littoral sediment, geology California, South Central Region, San Diego Region, Subregion X, Oceanside Cell,

Silver Strand Cell, Morro Bay Cell, Santa Maria River Cell Sedimentation in San Diego Trough and Contributing Submarine Canyons AUTHOR(S): Shepard, F. P.; Einsele, G. SOURCE: Sedimentology, Vol. 1, pp. 81-133 DATE: 01/01/62 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology sedimentation, submarine canyons, geomorphic processes California, San Diego Region, Subregion X Submarine Canyons AUTHOR(S): Shepard, F. P. SOURCE: In: The Sea, Ideas and Observations on Progress in the Study of the Seas, Vol. III, The Earth Beneath the Sea, M. N. Hill, Ed., Interscience Publ. Divn., John Wiley & Sons, N. Y., pp. 480-506 DATE: 01/01/63 ABSTRACT: Submarine canyons are described and discussed. KEYWORDS: Coastal Processes, Geomorphology submarine canyons, geology, geomorphic processes California, San Diego Region, Subregion X, Oceanside Cell Submarine Canyons and Other Sea Valleys AUTHOR(S): Shepard, F. P.; Dill, R. F. SOURCE: Rand McNally and Co., Chicago, Ill., 381 pp. DATE: 01/01/66 ABSTRACT: Investigation of a large number of marine valleys in different parts of the world. The distinction between various types of marine valleys is emphasized. KEYWORDS: Coastal Processes, Geomorphology submarine canyons, geology, geomorphic processes California, South Central Region, South Coast Region, San Diego Region La Jolla Submarine Fan-Valley AUTHOR(S): Shepard, F. P.; Buffington, E. C. SOURCE: Marine Geology, Vol. 6, pp. 107-143 DATE: 01/01/68 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology submarine canyons, geology California, San Diego Region, Subregion X, Oceanside Cell Currents in La Jolla and Scripps Submarine Canyons AUTHOR(S): Shepard, F. P.; Marshall, N. F. SOURCE: Science, Vol. 165, No. 3889, pp. 177-178 DATE: 01/01/69 ABSTRACT: not reviewed KEYWORDS: Coastal Processes submarine canyons, nearshore currents California, San Diego Region, Subregion X, Oceanside Cell Physiography and Sedimentary Processes of La Jolla Submarine Fan and Fan Valley, California AUTHOR(S): Shepard, F. P.; et al.

SOURCE: American Association of Petroleum Geologists Bulletin, Vol. 53, No. 2, pp. 390-420 DATE: 01/01/69 ABSTRACT: This report describes the types of sediment and the geomorphology of the La Jolla Fan. The basis of the description is analysis of box cores. KEYWORDS: Geomorphology, Coastal Processes geology, littoral sediment, sedimentation, submarine canyons California, San Diego Region, Subregion X, Oceanside Cell Submarine Geology AUTHOR(S): Shepard, F. P. SOURCE: Third Edition, Harper and Row, New York, 517 pp. DATE: 01/01/73 Includes Southern California area examples of coastal ABSTRACT: processes' related information and data. KEYWORDS: Coastal Processes, Geomorphology beaches, geomorphic processes, sedimentation, submarine canyons, wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Storm Generated Current in La Jolla Submarine Canyon, California AUTHOR(S): Shepard, F. P.; Marshall, N. F. SOURCE: Journal of Marine Geology, Vol. 15, pp. M19-M24 DATE: 01/01/73 ABSTRACT: not reviewed KEYWORDS: Coastal Processes storms/floods, submarine canyons, nearshore currents California, San Diego Region, Subregion X, Oceanside Cell Dives Into Outer Coronado Canyon System AUTHOR(S): Shepard, F. P.; Marshall, N. F. SOURCE: Journal of Marine Geology, Vol. 18, No. 5, pp. 313-323 DATE: 01/01/75 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology submarine canyons, geology, hydrographic surveys California, San Diego Region, Subregion X, Silver Strand Cell Currents in Submarine Canyons and Other Sea Valleys AUTHOR(S): Shepard, F. P.; Marshall, N. F.; McLoughlin, P. A.; Sullivan, G. G. SOURCE: In: Studies in Geology, American Association of Petroleum Geologists, Tulsa, Oklahoma, 173 pp. DATE: 01/01/79 ABSTRACT: Measurement of currents in submarine canyons since 1968. Includes nine California submarine canyons from Monterey Bay to La Jolla, and a fault valley 80 km off San Diego. KEYWORDS: Coastal Processes submarine canyons, nearshore currents California, South Central Region, South Coast Region, San Diego Region,

Subregion X

Currents in Submarine Canyons and Other Types of Sea Valleys AUTHOR(S): Shepard, F. P. SOURCE: In: Geology of Continental Slopes, L. J. Doyle and O. H. Pilkey Eds., Spec. Publ. No. 27, Society of Economic Paleontologists and Mineralogists, Tulsa, Oklahoma, pp. 85-94 DATE: 01/01/79 ABSTRACT: Currents along the floors of submarine canyons and other types of slope valleys are well documented in this report after obtaining 25,000 hours of records from various parts of the world at a variety of depths. KEYWORDS: Geomorphology, Coastal Processes coastal currents, littoral sediment, offshore/onshore transport, nearshore currents, submarine canyons California, South Coast Region Greatly Accelerated Currents in Submarine Canyon Head During Optimum Astronomical Tide-Producing Conditions AUTHOR(S): Shepard, F. P.; Sullivan, G. G.; Wood, F. J. SOURCE: Shore & Beach, Vol. 49, No. 1, pp. 32-34 DATE: 01/01/81 ABSTRACT: January 1979 records provide a subsurface confirmation of the special conditions designated in Wood's treatise as proxigean spring tides. Tides were compared with records of canyon currents from the head of La Jolla Canyon. KEYWORDS: Coastal Processes nearshore currents, submarine canyons, tides, wind California, San Diego Region, Subregion X, Oceanside Cell Late Pleistocene Channel of the Lower Santa Margarita River, San Diego County, California AUTHOR(S): Shlemon, R. J. SOURCE: In: Geologic Guide of San Onofre Nuclear Generating Station and Adjacent Regions of So. California, D. L. Fife, Ed., Pac. Sec. Amer. Assoc. of Pet. Geol., Bakersfield, Calif., pp. A-63 - A-70 DATE: 01/01/77 ABSTRACT: This report describes a buried gravel channel underlying the lower Santa Margarita River traced to a depth of approximately 50 meters below sea level at the present coastline. The channel was probably cut and filled during the late Pleistocene. KEYWORDS: Geomorphology geology, geomorphic processes, maps, river-bed sediment California, San Diego Region, Subregion X, Oceanside Cell

Seismic Studies in the Southern California Continental Borderland

AUTHOR(S): Shor, G. G.; Raitt, R. W. SOURCE: SIO Reference 58-78, Marine Physical Lab., Scripps Institution of Oceanography, La Jolla, California, 17 pp. DATE: 10/27/58 ABSTRACT: Determination of deep crustal structure by seismic refraction methods. Work performed between December 1948 and October 1955. Tests were made of methods and equipment, in addition to specific study of the problem of crustal transition from continent to ocean. KEYWORDS: Coastal Processes, Geomorphology geology, neotectonics, geomorphic processes California, South Central Region, South Coast Region, San Diego Region Seismic Refraction Studies in the Southern California Borderland, 1949-1974 AUTHOR(S): Shor, G. G.; Raitt, R. W.; McGowan, D. D. SOURCE: SIO Reference 76-13, Scripps Institution of Oceanography, La Jolla, California, 70 pp. DATE: 07/15/76 ABSTRACT: Seismic refraction observations have been made by the staff of the Marine Physical Laboratory in numerous locations in and near the Southern California Continental Borderland; many of these stations have not been reported previously. Travel-time plots, cruise notes, position data, and layer solutions for fifteen operations in the area provide the basic information for studies of crustal structure, and are presented here. KEYWORDS: Coastal Processes, Geomorphology geology, neotectonics, geomorphic processes California, South Central Region, South Coast Region, San Diego Region Potential Shoreline Impacts from Proposed Structures at Point Conception, California AUTHOR(S): Simison, E. J.; Leslie, K. C.; Noble, R. M. SOURCE: Coastal Zone '78, Symposium, American Society of Civil Engineers, New York, Vol. III, pp. 1639-1652 DATE: 01/01/78 ABSTRACT: Field and historical aerial photographic examination of 29 structures in Southern California Bight and literature review of similar structures in other environments. A review of appli- cable theory and model studies. Pile-supported piers appear to have no appreciable impact on the adjacent shoreline. The report suggests that in general detached breakwaters produce only minimal impact when offshore distance of the structure is greater than six times the breakwater length. KEYWORDS: Coastal Processes aerial photography, coastal structures, shoreline changes, coastal erosion

California, South Central Region, Subregion VII, Santa Barbara Cell Effect of the Santa Margarita Project on Beach Nourishment, Draft Report AUTHOR(S): Simons, Li and Assoc. SOURCE: For: Bureau of Land Management, U. S. Dept. of Interior; Simons, Li and Associates, Inc., Fort Collins, Colorado, 100+ pp. DATE: 04/01/84 ABSTRACT: Analytical investigation to assess project impact on 1) beach sand replenishment, and 2) stability of least tern habitat of proposed Fallbrook and Deluz reservoirs in the Santa Margarita River watershed. Conclusions indicate negligible impact on beach sand replenishment. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics littoral sediment, environmental constraints, river-bed sediment, river sediment discharge, reservoirs, watershed sediment California, San Diego Region, Subregion X, Hydraulic, Erosion and Sedimentation Study of the Santa Clara River, Ventura County, California AUTHOR(S): Simons, Li and Associates SOURCE: Simons, Li and Associates, Inc., Newport Beach, California, 320 gg. DATE: 09/01/83 ABSTRACT: This report presents the results of an extensive sediment study of the sediment transport characteristics of the Santa Clara River. Study included a mathematical sediment routing model. KEYWORDS: Hydrology & Hydraulics, Geomorphology river sediment discharge, sedimentation California, South Central Region, Subregion VII, Santa Barbara Cell Hydraulic, Erosion and Sedimentation Study of the Santa Clara River, Ventura County, California AUTHOR(S): Simons, Li and Associates SOURCE: Simons, Li and Associates, Inc., Newport Beach, California, 320 pp. DATE: 09/01/83 ABSTRACT: This report presents the results of an extensive sediment study of the sediment transport characteristics of the Santa Clara River. Study included a mathematical sediment routing model. KEYWORDS: Hydrology & Hydraulics, Geomorphology river sediment discharge, sedimentation California, South Central Region, Subregion VII, Santa Barbara Cell Sedimentation and Erosion Study of Calleguas Creek, Ventura County, California, Final and Supplemental Data Reports AUTHOR(S): Simons, Li and Associates

SOURCE: Simons, Li and Assoc., Inc., Newport Beach, California, 104 pp. and 73 pp. DATE: 07/05/84 ABSTRACT: Suspended sediment measurements and the Modified Einstein Method (for unsampled load) were used in a regression analysis to obtain an equation for sediment discharge per unit width based on flow velocity. A sediment budget type erosion- sedimentation analysis was performed on a reach by reach basis, using only particle sizes larger than very fine sand. A sediment yield to Mugu Lagoon was calculated for the 100 year flood only. KEYWORDS: Hydrology & Hydraulics river sediment discharge, river-bed sediment, sedimentation, watershed sediment, river discharge California, South Central Region, Subregion VII, Santa Barbara Cell San Juan Creek and Trabuco Creek, Facility Nos. LO1 and LO2, Aggradation/Degradation Study AUTHOR(S): Simons, Li and Associates SOURCE: Orange County Environmental Management Agency, Santa Ana, California, 158 pp. DATE: 08/01/84 Report of a sediment routing analysis of San Juan and Trabuco ABSTRACT: Creeks. A mathematical model was constructed using Simon, Li and Associates program 'QUASED'. KEYWORDS: Hydrology & Hydraulics, Coastal Processes river sediment discharge California, South Coast Region, Subregion IX, Subregion X, Oceanside Cell San Juan Creek and Trabuco Creek, Facility Nos. LO1 and LO2, Aggradation/Degradation Study AUTHOR(S): Simons, Li and Associates SOURCE: Orange County Environmental Management Agency, Santa Ana, California, 158 pp. DATE: 08/01/84 ABSTRACT: Report of a sediment routing analysis of San Juan and Trabuco Creeks. A mathematical model was constructed using Simon, Li and Associates program 'QUASED'. KEYWORDS: Hydrology & Hydraulics, Coastal Processes river sediment discharge California, South Coast Region, Subregion IX, Subregion X, Oceanside Cell Debris Deposition Study for Without-Project and With-Project Conditions, Santa Barbara County Streams, Mission Creek/Rattle- snake Creek AUTHOR(S): Simons, Li and Associates SOURCE: Simons, Li and Associates, Inc., Newport Beach, California, 100 pp.

DATE: 09/26/84 ABSTRACT: This report discusses debris deposition in sites fairly far from the ocean, however, bed sediment gradations are provided all along Mission Creek. KEYWORDS: Hydrology & Hydraulics river-bed sediment California, South Central Region, Subregion VII, Santa Barbara Cell Debris Deposition Study for Without-Project and With-Project Conditions, Santa Barbara County Streams; Mission Creek/ Rattlesnake Creek AUTHOR(S): Simons, Li and Associates SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District, California; Simons, Li and Associates, Unpublished Report, Contract No. DACW09-83-D-0049, Newport Beach, California DATE: 09/26/84 ABSTRACT: Calculation of potential debris flows for two Santa Barbara County creeks. No direct measurements, but analysis and methodology may be useful in model development. This report discusses debris deposition in sites fairly far from the ocean, however, bed sediment gradations are provided all along Mission Creek. KEYWORDS: Hydrology & Hydraulics fires, river sediment discharge, storms/floods, watershed sediment California, South Central Region, Subregion VII, Santa Barbara Cell Hydrologic Report on Storms of 1969 AUTHOR(S): Simpson, L. D. SOURCE: Los Angeles County Flood Control District, Los Angeles, Calfiornia, Vol. 1, 192+ pp. and Vol. 2, 55+ pp. DATE: 06/01/69 Extensive report with data on the 1969 storms and floods. ABSTRACT: KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, river sediment discharge, storms/floods California, South Coast Region Hydrologic Report on Storms of 1969 AUTHOR(S): Simpson, L. D. SOURCE: Los Angeles County Flood Control District, Los Angeles, California, Vol. 1, 192+ pp. and Vol. 2, 55+ pp. DATE: 06/01/69 ABSTRACT: Extensive report with data on the 1969 storms and floods. Includes data. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, river sediment discharge, storms/floods California, South Coast Region

Streamflow Reactions of a Fire-Damaged Watershed

AUTHOR(S): Sinclair, J. D.; Hamilton, E. L. SOURCE: Proceedings of the ASCE, Journal of the Hydraulics Division, Vol. 81, 629 pp. DATE: 09/01/54 ABSTRACT: Good analysis of post-fire runoff and erosion from a Southern California watershed. Compares two watersheds, one with no previous fire history, the other burned in 1919. Includes graphs, tables and photos. KEYWORDS: Hydrology & Hydraulics fires, watershed sediment, river discharge California, South Coast Region, Subregion IX Coastal Energy Development in Santa Barbara County AUTHOR(S): Skinnarland, K.; Willis, M. Coastal Zone '80, Symposium, Hollywood, Florida, November 17-SOURCE: 20, 1980, Vol. I, ASCE, N. Y., pp. 634-648 DATE: 01/01/80 ABSTRACT: Examines the issue of energy development in the coastal area of Santa Barbara County which is experiencing significant impacts from onshore and offshore development. KEYWORDS: Coastal Processes, Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., shoreline use California, South Central Region, Subregion VII, Santa Barbara Cell Dredging and Spoil Disposal - Major Geologic Processes in San Diego Bay, California AUTHOR(S): Smith, D. D. In: Estuarine Processes, Vol. II, Circulation, Sediments and SOURCE: Transfer of Material in the Estuary, Academic Press, Inc., San Francisco, California, pp. 150-166 DATE: 01/01/77 ABSTRACT: Investigation of the importance of dredging and spoil disposal as estuarine geological processes that are substantially more important than all other erosional and depositional processes presently operating in San Diego Bay. Includes data. KEYWORDS: Coastal Processes, Geomorphology estuarine sediment storage, littoral sediment, longshore transport, mining, sedimentation, sand entrapment California, San Diego Region, Subregion X, Silver Strand Cell Sea Level Variations and Highest Water Levels Along the California Coast AUTHOR(S): Smith, R. A.; Leffter, R. J. SOURCE: National Ocean Survey, NOAA, U. S. Department of Commerce, Washington, D. C. DATE: 01/01/78

ABSTRACT: not reviewed KEYWORDS: Coastal Processes sea level change, tides California, South Central Region, South Coast Region, San Diego Region Water Level Variations Along California Coast AUTHOR(S): Smith, R. A.; Leffter, R. J. SOURCE: Journal of Waterway, Port, Coastal, and Ocean Division, Vol. 106, No. WW3, ASCE, N. Y., pp. 335-348 DATE: 08/01/80 Long-term variations in sea level relative to land and ABSTRACT: highest water levels are examined at 15 locations along the California coast. Also see August 1981 discussion of data. KEYWORDS: Coastal Processes sea level change, tides California, South Central Region, South Coast Region, San Diego Region Edgewater Towers Project AUTHOR(S): Smoote, V. A.. SOURCE: In: Field Guide to Selected Engineering Geologic Features, Santa Monica Mountains, J. R. Keaton, Ed., Assoc. of Eng. Geologists, Southern California Section, Los Angeles, California, pp. 76-99 DATE: 05/19/79 ABSTRACT: This report describes recent movement of a coast landslide that has damaged a group of apartment buildings at the Edgewater Towers. KEYWORDS: Geomorphology geology, geomorphic processes, cliff sediment California, South Coast Region, Subregion VIII, Santa Monica Cell Long Period Waves Over California's Continental Borderland, Part 1: Background Spectra AUTHOR(S): Snodgrass, F. E.; Munk, W. H.; Miller, G. R. SOURCE: Journal of Marine Res., Vol. 20, No. 1, pp. 3-30 DATE: 01/01/62 ABSTRACT: not reviewed KEYWORDS: Coastal Processes wave climate, wave transformation California Waves on a Marine Inversion Undergoing Mountain Leeside Wind Shear AUTHOR(S): Sommers, W. T. SOURCE: Journal of Applied Meteorology, Vol. 20, No. 6, pp. 626-636 DATE: 06/01/81 ABSTRACT: An analysis of Santa Ana conditions during fire season. Details of November 14-16, 1977 synoptic conditions during fire and Santa Ana conditions. Includes data KEYWORDS: Oceanography & Meteorology fires, wind California, South Central Region, South Coast Region, San Diego Region

The Geology Element for the South Coast Region AUTHOR(S): South Coast Regional Commission SOURCE: South Coast Regional Commission, Regional Element III, California Coastal Zone Conservation Plan, Long Beach, California, 145 pp. DATE: 01/01/74 ABSTRACT: The third of nine elements to be prepared by the South Coast Regional Commission as part of the California Coastal Zone Conservation Plan. This document discusses geologic hazards of statewide and regional concern. KEYWORDS: Geomorphology, Coastal Processes coastal erosion, geology, maps, tsunamis California, South Coast Region, Subregion VIII, Subregion IX San Onofre Nuclear Generating Station, Units 2 and 3, Preliminary Safety Analysis Report, Amendment 17 AUTHOR(S): Southern California Edison SOURCE: Report No. DOCKET-50362-38, Southern California Edison Co., Rosemead, California, 339 pp. DATE: 04/18/73 Information on tsunami and slope stability studies at the ABSTRACT: site for the San Onofre Nuclear Generating Station, Units 2 and 3 is presented. KEYWORDS: Coastal Processes tsunamis, coastal structures, wave climate California, San Diego Region, Subregion X, Oceanside Cell San Onofre Nuclear Generating Station, Units 2 and 3, Preliminary Safety Analysis Report, Amendment 18 AUTHOR(S): Southern California Edison SOURCE: Report No. DOCKET-50362-42, Southern California Edison Co., Rosemead, California, 32 pp. DATE: 06/15/73 The amendment provides revised information concerning site ABSTRACT: tsunami studies and several errata. KEYWORDS: Coastal Processes tsunamis, coastal structures, wave climate California, San Diego Region, Subregion X, Oceanside Cell A Summary of Knowledge of the Southern California Coastal Zone and Offshore Areas, Vol. I and III AUTHOR(S): Southern California Ocean Studies Consortium SOURCE: Dailey, M. D., Hill, B., Lansing, N., Eds., For: U. S. Department of Interior, Bureau of Land Management, Washington, D. C., 500+ pp. each volume. DATE: 09/01/74 ABSTRACT: This report describes the economic and physical forces, and biological and social resources existing in the Southern California continental borderland area, including 18 lagoons and harbors.

KEYWORDS: Coastal Processes, Socioeconomics, Oceanography & Meteorology climatology, geology, growth potential/recreation, wind, population, coastal currents California, South Central Region, South Coast Region, San Diego Region Coastal Data Inventory for the Los Angeles County Region AUTHOR(S): Southern California, University of Sea Grant Program, Technical Report TR-79-1, NOAA 04-8-M01-186, SOURCE: Institute of Marine and Coastal Studies, University of Southern California, Los Angeles, California, 224 pp. DATE: 08/01/79 ABSTRACT: Basic data sources are identified and described to provide insight into the kinds of data collected/published. Attempted evaluation of the quality of data. Topics include ports, water- borne commerce; land use construction and permits; other land use; commercial fisheries; recreation fishing, boating, marinas; meteorology and climatology; and earthquakes. KEYWORDS: Coastal Processes, Socioeconomics climatology, growth potential/recreation, institutions/planning/mgmt., population California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, Geologic Mapping of Erosional Susceptibility AUTHOR(S): Spear, S. G. M. S. Thesis, University of Southern California, Los Angeles, SOURCE: California, 118 pp. DATE: 06/01/71 ABSTRACT: During the winter of 1970-71, the Valyermo area of Southern California was studied to determine erosional susceptibility. A geomorphic land classification map representing all of these parameters was created and extrapolations were made regarding the nature of erosion in the area studied. KEYWORDS: Geomorphology geology, geomorphic processes, maps, watershed sediment California Nearshore Sediment at San Onofre, California AUTHOR(S): Speidel, W. C. SOURCE: In: Studies on the Geology of Camp Pendleton and Western San Diego County, California, A. Ross and R. J. Dowlen, Eds., San Diego Association of Geologists, San Diego, Calif., pp. 36-47 DATE: 01/01/75 ABSTRACT: A long-term sediment sampling program was conducted in shallow ocean waters five miles south of San Clemente immediately adjacent to the San Onofre Nuclear Generating Station. The environmental monitoring program began with

several site surveys in 1963, and was followed in 1964 by a repetitive sampling program. KEYWORDS: Geomorphology, Coastal Processes geomorphic processes, littoral sediment, longshore transport, maps California, South Coast Region, Subregion IX, Oceanside Cell Zircon and Other Accessory Minerals, Coast Ranges Batholith, California AUTHOR(S): Spotts, J. H. SOURCE: Geologic Society of America Bulletin, Vol. 73, pp. 1221-1240 DATE: 01/01/62 ABSTRACT: Heavy-mineral analyses and statistical studies of zircon morphology were used to correlate a series of granitic plutons in the Coast Ranges of central California and the Farallon Islands. KEYWORDS: Geomorphology cliff sediment, geology, maps, petrology California, South Central Region, Subregion VI, Morro Bay Cell Surface Currents as Determined by Drift Card Releases Over the Continental Shelf Off Central and Southern California AUTHOR(S): Squire, J. L. SSRE-718, U. S. Department of Commerce, NOAA; National Marine SOURCE: Fisheries Service, La Jolla, California, 12 pp. DATE: 12/01/77 From March 1964 through February 1966, 8,320 plastic drift ABSTRACT: cards were released from an aircraft at selected points to measure surface current drift over 2 areas: from the coast to central California between Point Arena and Point Sur; and Southern California between Point Arguello and Punta Salsipuedes, Baja California, Mexico. The distribution of the directions from which drift cards were returned increased the evidence of the large gyre and associated Southern California countercurrent south of Point Conception during April through August, and to a lesser extent in October and December. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, South Central Region, South Coast Region, San Diego Region The Weather and Circulation, February 1969 AUTHOR(S): Stark, L. P. Monthly Weather Review, Vol. 97, No. 5, pp. 407-414 SOURCE: DATE: 05/01/69 ABSTRACT: Gives details of the high latitude blocking which caused heavy rains in California in February 1969. February rain was produced by a deep trough off of the coast. KEYWORDS: Oceanography & Meteorology climatology, precipitation California

Mugu Lagoon and Its Tributaries, Geology and Sedimentation AUTHOR(S): Steffen, L. J. SOURCE: U. S. Dept. of Agriculture, Soil Conservation Service, Watershed Planning Staff, Davis, California, 73 pp. DATE: 04/01/82 ABSTRACT: This paper provides information on rates and volumes of erosion and sediment yield in tributary watersheds to Mugu Lagoon, including Revlon Slough, Beardsley Wash, and Calleguas Creek. KEYWORDS: Hydrology & Hydraulics sedimentation, watersheds, watershed sediment, estuarine sediment storage California, South Central Region, Subregion VII, Santa Barbara Cell Mugu Lagoon and Its Tributaries, Geology and Sedimentation AUTHOR(S): Steffen, L. J. SOURCE: U. S. Dept. of Agriculture, Soil Conservation Service, Watershed Planning Staff, Davis, California, 73 pp. DATE: 04/01/82 ABSTRACT: This paper provides information on rates and volumes of erosion and sediment yield in tributary watersheds to Mugu Lagoon, including Revlon Slough, Beardsley Wash, and Calleguas Creek. KEYWORDS: Hydrology & Hydraulics sedimentation, watersheds, watershed sediment, estuarine sediment storage California, South Central Region, Subregion VII, Santa Barbara Cell Field Investigations of Suspended Sediment Transport in the Nearshore Zone AUTHOR(S): Sternberg, R. W.; Shi, N. C.; Downing, J. D. SOURCE: Coastal Engineering Abstracts, 19th Conference on Coastal Engineering, ASCE, N. Y., pp. 34-35 DATE: 01/01/84 ABSTRACT: As part of the Nearshore Sediment Transport Study funded by NOAA Sea Grant, a field investigation of the suspended sediment distribution and wave conditions were carried out at Leadbetter Beach, Santa Barbara in 1980. Major objectives of the study were to characterize the suspended sediment distribution in the nearshore zone, and to investigate the relationship between surfzone physical processes and the littoral transport of suspended sediment. KEYWORDS: Coastal Processes littoral sediment, longshore transport, wave transformation, wave climate, longshore current, California, South Central Region, Subregion VII, Santa Barbara Cell The Oceanography of Santa Monica Bay, California

AUTHOR(S): Stevenson, R. E.; Tibby, K. B.; Gorsline, D. S.

SOURCE: USC Alan Hancock Foundation, Geology Department, University of Southern California, Los Angeles, California, DATE: 09/18/56 ABSTRACT: Gives a summary of wind and wave climatic conditions for the Santa Monica Bay. Includes wind roses, wave roses and a discussion of climatic onditions which generate waves that affect Santa Monica Bay. KEYWORDS: Oceanography & Meteorology, Coastal Processes wave climate, wind, wave climate California, South Coast Region, Subregion VIII, Santa Monica Cell An Investigation of Nearshore Ocean Currents at Newport Beach, California AUTHOR(S): Stevenson, R. E. SOURCE: Allan Hancock Foundation, University of Southern California, Los Angeles, California, 108 pp. DATE: 01/01/58 ABSTRACT: not reviewed KEYWORDS: Coastal Processes coastal currents, nearshore currents California, South Coast Region, Subregion IX, San Pedro Cell Some Characteristics of Sediments on the Mainland Shelf of Southern California AUTHOR(S): Stevenson, R. E.; Uchupi, E.; Gorsline, D. S. SOURCE: In: Oceanographic Survey of Continental Shelf Area of Southern California, Section 2, California Water Pollution Control Board, Pub. 20, Sacramento, California, pp. 59-109 DATE: 01/01/59 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geology, sedimentation, littoral sediment California, South Central Region, South Coast Region, San Diego Region The Marine Climate of Southern California AUTHOR(S): Stevenson, R. E. In: Oceanographic Survey of the Continental Shelf Area of SOURCE: Southern California; Publication No. 20, California State Water Pollution Control Board, pp. 1-58 DATE: 01/01/59 ABSTRACT: Gives a good summary of Southern California climate (based on data to 1959). Discussion of climate followed by tables of major types, directions, return periods, etc. of waves in Southern California and generation areas. Includes other data. KEYWORDS: Oceanography & Meteorology climatology, wave climate California, South Central Region, South Coast Region, San Diego Region The Oceanography of Southern California Mainland Shelf

AUTHOR(S): Stevenson, R. E.

SOURCE: Allan Hancock Foundation, University of Southern California, Los Angeles, California DATE: 01/01/61 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, climatology, wave climate California, South Central Region, South Coast Region, San Diego Region Lithofacies and Origin of the San Onofre Breccia, Coastal California AUTHOR(S): Stewart, C. J. SOURCE: In: Miocene Lithofacies and Depositional Environments, Coastal Southern California and NW Baja California, Geological Society of America, AAPG-SEPM-SEG, Bakersfield, California, pp. 25-42 DATE: 01/01/79 ABSTRACT: Describes the occurrence of cobbles and boulders of glaucophane schist and rock grains in sedimentary rocks in Southern California. KEYWORDS: Geomorphology cliff sediment, geology, maps California, Mexico, San Diego Region, Subregion X, Oceanside Cell Augmentation of the Hydrologic Records in the Western United States Using Tree-Rings AUTHOR(S): Stockton, C. W.; Boggess, W. R. SOURCE: Laboratory of Tree-Ring Research, University of Arizona, Phoenix, Arizona, 28 pp. DATE: 03/25/79 ABSTRACT: Reviews statistics of tree-ring data. Makes claims of treering possibilities which seem to overstate the value of the technique. Shows drought periods and heavy rainfall years. KEYWORDS: Oceanography & Meteorology climatology, precipitation California Bluff Stability and Urbanization of the Upper Newport Bay Area, Newport Beach. California AUTHOR(S): Stoney, G. F.; Nicoll, G. A.; Dablow, j. SOURCE: Abstract; Geologic Society of America, Vol. 9, No. 4, p. 509 DATE: 02/01/77 ABSTRACT: Describes the history and present status of landslide activity for the bluffs in Upper Newport Bay. KEYWORDS: Geomorphology, Coastal Processes cliff sediment, coastal erosion, geomorphic processes, urbanization California, South Coast Region, Subregion IX, San Pedro Cell Sedimentation and Climatic Patterns in the Santa Barbara Basin During the Nineteenth and Twentieth Centuries AUTHOR(S): Stoutar, A.; Crill, P. A.

SOURCE: Geologic Society of America Bulletin, Vol. 88, pp. 1161-1172 DATE: 01/01/77 ABSTRACT: Sedimentation rates in the Santa Barbara Basin are determined and correlated with tree-growth and rain fall data. KEYWORDS: Geomorphology, Coastal Processes geomorphic processes, offshore/onshore transport, sedimentation, climatology, littoral sediment California, South Central Region, Subregion VII, Santa Barbara Cell San Diego-El Centro Sheet, Geologic Map of California AUTHOR(S): Strand, R. G. SOURCE: California Division of Mines and Geology, Sacramento, California DATE: 01/01/62 ABSTRACT: Geologic Map Scale 1:250,000 with index of maps used to compile the San Diego-El Centro sheet, San Diego, California. KEYWORDS: Geomorphology geology, maps California, San Diego Region, Subregion X, Oceanside Cell Inventory of the Natural Resources of Sandy Beaches in Southern California AUTHOR(S): Straughan, D. SOURCE: Allan Hancock Foundation Tech. Report No. 6: Inst. for Marine and Coastal Studies and Allan Hancock Foundation, Univ. of Southern California, Los Angeles, California, 447 pp. DATE: 01/01/81 ABSTRACT: Intertidal beach profiles and surveys for 33 locations in Southern California. Report summarizes 12 years of research on Southern California sandy beaches. KEYWORDS: Coastal Processes beaches, beach profiles, coastal erosion, littoral sediment, offshore/onshore transport California, South Central Region, South Coast Region, San Diego Region Slope of Sea Level Along the Pacific Coast of the United States AUTHOR(S): Sturges, W. SOURCE: Tech. Report No. TR-18, Ref. 67-13, Rhode Island University, Kingston Narragansett Marine Lab., 13 pp.; and Jour. of Geophysical Research, 1967, Vol. 72, No. 14, pp. 3627-37 DATE: 05/01/68 ABSTRACT: The long-term mean slope of sea level along the Pacific coast of the United States is estimated for comparison with the rise from south to north reported by precise leveling. A leveling error that could cause a slope of the

observed sign and amount is discussed. The 9-cm difference found in the present study is consistent with the effect of changing latitude as the California Current flows south. KEYWORDS: Coastal Processes, Oceanography & Meteorology sea level change, tides California, South Central Region, South Coast Region, San Diego Region Sea Level Slope Along Continental Boundaries AUTHOR(S): Sturges, W. SOURCE: Journal of Geophys. Res., Vol. 79, pp. 825-830 DATE: 01/01/74 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology sea level change, tides California Some Simple Devices for the Study of Induced Surges AUTHOR(S): Summers, H. J.; Palmer, H. D.; Cook, D. O. SOURCE: University of Southern California, Los Angeles, California, Department of Geological Sciences; and Journal of Sedimentary Petrology, September 1971, pp. 861-866 DATE: 04/29/71 ABSTRACT: For a study of sediment response to oscillatory surges in the near shore zone of the ocean off Southern California it became necessary to develop a means for measuring surge velocities, periods and directions. A pendulum type wave regime indicator, a prototype surge velocity indicator, and a refined instrument to record surge velocity and direction were devised and constructed to make direct sea floor measurements. Details of the equipment and schematic diagrams are shown. KEYWORDS: Coastal Processes littoral sediment, wave climate, wave transformation, longshore current, nearshore currents California The Waters Off the Coast of Southern California, March-July, 1937 AUTHOR(S): Sverdrup, H. V.; Fleming, R. H. SOURCE: Bulletin 4, Scripps Institution of Oceanography, UCSD, La Jolla, California, pp. 261-378 DATE: 01/01/41 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, South Central Region, South Coast Region, San Diego Region Littoral Environment Observation Program in California, Preliminary

Report,

February-December, 1968 AUTHOR(S): Szuwalski, A. SOURCE: CERC Misc. Paper 2-70, U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., 50+ pp. DATE: 02/01/70 ABSTRACT: Describes the LEO program and assembles in one paper the data collected by the program February-December 1968. Beach characteristics recorded are: foreshore slope, width and elevation of berm, presence of cusps, and sediment samples. Sea variables include: tide level, wave height, period and direction, type of breaker, direction and velocity of littoral currents, presence of rip currents, and water temperature. Wind velocity and direction are recorded and panoramic photos are obtained. Data collected are being used as a base to analyze physical characteristics of the shoreline and littoral processes affecting it. KEYWORDS: Coastal Processes longshore current, beach profiles, tides, wave climate, littoral sediment, wind California, South Central Region, South Coast Region, San Diego Region A New Method of Estimating Debris-Storage Requirements for Debris Basis AUTHOR(S): Tatum, F. E. SOURCE: U. S. Corps of Engineers, Los Angeles District, Los Angeles, California, 13 pp. DATE: 02/01/63 ABSTRACT: Method based on observed data mostly from floods. Includes data from the Los Angeles area after fires (1927, 1933, 1935, and 1953). Includes analysis, and graphs. KEYWORDS: Hydrology & Hydraulics fires, storms/floods, watershed sediment California, South Coast Region, Subregion VIII, Subregion IX Joint Occurrences in Coastal Flooding AUTHOR(S): Tayfun, M. A. SOURCE: Journal of Waterway, Port, Coastal, and Ocean Division, Vol. 105, No. WW2, ASCE, N. Y., pp. 107-123 DATE: 05/01/79 ABSTRACT: Extreme levels of coastal flooding arising from the joint occurrence of a relatively rare phenomenon, such as a hurricane, a winter storm, or а tsunami, with the astronomical tide have a stochastic nature resulting from the random occurrence of the rare event relative to the phase of the astronomical tide. In addition, a rare event may have an effective duration or persistence varying from a small fraction to several multiples of a characteristic tidal

cycle. This article gives assumptions and discusses them. Includes February 1980 discussion of article. KEYWORDS: Coastal Processes, Oceanography & Meteorology tides, tsunamis, wave climate, storms/floods, California, South Central Region, South Coast Region, San Diego Region Sediment Management for Southern California AUTHOR(S): Taylor, B. D. SOURCE: Coastal Zone '78 Symposium, Vol. III, ASCE, N. Y., pp. 2259-2264 DATE: 01/01/78 ABSTRACT: Discusses Calif. Inst. of Tech./Scripps Shore Processes Lab. 1975 study giving objectives, strategies and results of regional sediment budget analysis. Average of 12 million cubic meters of sediment of all sizes is eroded annually from inland areas. Four million cubic meters is sand-sized sediment similar to that which forms natural beaches, only 25 per cent of which reaches the shoreline. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, littoral sediment, river sediment discharge, watershed sediment California, Mexico, South Central Region, South Coast Region, San Diego Region Inland Sediment Movements by Natural Processes AUTHOR(S): Taylor, B. D. EQL Report No. 17-B, Environmental Quality Laboratory, SOURCE: California Institute of Technology, Pasadena, California, 81 pp. DATE: 10/01/81 ABSTRACT: Equations are developed to predict denudation rates for various types of drainage areas in Southern California. The equations were derived by regression analysis of measurements of sediment accumulation in Southern California sediment catchments. The equations were applied to "Hydrographic Drainage Units", which drain to the coast, to estimate coastal sediment delivery. KEYWORDS: Hydrology & Hydraulics, Coastal Processes geomorphic processes, institutions/planning/mgmt., river sediment discharge California, South Central Region, South Coast Region, San Diego Region Sediment Management for Southern California Mountains Coastal Plains and Shoreline, Part B, Inland Sediment Movements by Natural Processes AUTHOR(S): Taylor, B. D. SOURCE: Environmental Quality Laboratory Report 17-B, California Institute of Technology, Pasadena, California, 81+pp. DATE: 10/01/81

Calculates sediment movements in Southern California. Divides ABSTRACT: region into hills, plains and mountains and develops sediment movement model in which plains get an arbitruary coeffocoemt pf 1.0, hills get 2.0 (arbitrarily) and mountains get 2.7 (least-squares-fit). Includes watershed maps and data. KEYWORDS: Hydrology & Hydraulics river sediment discharge, watershed sediment California, South Central Region, South Coast Region, San Diego Region Inland Sediment Movements by Natural Processes AUTHOR(S): Taylor, B. D. SOURCE: EQL Report No. 17-B, Environmental Quality Laboratory, California Institute of Technology, Pasadena, California, 81 pp. DATE: 10/01/81 ABSTRACT: Equations are developed to predict denudation rates for various types of drainage areas in Southern California. The equations were derived by regression analysis of measurements of sediment accumulation in Southern California sediment catchments. The equations were applied to "Hydrographic Drainage Units", which drain to the coast, to estimate coastal sediment delivery. KEYWORDS: Hydrology & Hydraulics, Coastal Processes geomorphic processes, institutions/planning/mgmt., river sediment discharge California, South Central Region, South Coast Region, San Diego Region Bibliography of Marine Geology and Oceanography, California Coast AUTHOR(S): Terry, R. D. SOURCE: Special Report 44, California Division of Mines and Geology, San Francisco, California, 131 pp. DATE: 01/01/55 ABSTRACT: The fields covered by this bibliography include: sedimentation, submarine topography, beach erosion and its control, marine engineering problems, coastal sand dunes, tideland petroleum developments, marine geophysics (including seismology and tsunamis), salt water intrusion, and physical and chemical oceanography. KEYWORDS: Geomorphology, Coastal Processes, Oceanography & Meteorology beaches, coastal erosion, geology, geomorphic processes, maps, sedimentation California Submarine Geology of Santa Monica Bay AUTHOR(S): Terry, R. D.; Keesling, S. A.; Uchupi, E. SOURCE: Hyperion Engineering, Inc. DATE: 01/01/56 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology submarine canyons, geology

California, South Coast Region, Subregion VIII, Santa Monica Cell Computer Prediction of Nearshore and Surf Zone Statistics AUTHOR(S): Tetra Tech SOURCE: For: Office of Naval Research, Geography Programs, Code 462, Contract N000 14-69-C-0107 P00005, Tetra Tech No. TC-394, Tetra Tech, Inc., Pasadena, California, 86+ pp. DATE: 09/01/75 ABSTRACT: A study to develop prediction technology for shallow water waves, breakers, and longshore current velocities using the visually observed deep water wave statistics as input. KEYWORDS: Coastal Processes longshore current, wave transformation California, South Central Region, South Coast Region, San Diego Region Littoral Transport Study, North Island, San Diego Naval Air Station, Final Report AUTHOR(S): Tetra Tech For: Ferver Engineering Co., San Diego, California, Contract SOURCE: TC-3206; Tetra Tech, Pasadena, California, 38 pp. DATE: 06/01/78 ABSTRACT: To provide an estimate of suitability and stability of proposed beach fill for the shore area between Ramps 7 and 10. Includes data. KEYWORDS: Coastal Processes beach nourishment/dredging, littoral sediment, longshore transport, offshore/onshore transport California, San Diego Region, Subregion X, Silver Strand Cell A Wave Climatology for U. S. Coastal Waters AUTHOR(S): Thompson, E. F.; Harris, D. L. CERC Reprint 1-72, U. S. Army Corps of Engineers, Coastal SOURCE: Engineering Research Center, Vicksburg, Mississippi DATE: 05/01/72 ABSTRACT: Cumulative wave height distribution functions for the past 20 years for 10 wave gage locations have been studied in the format of the exponential distribution. KEYWORDS: Coastal Processes wave climate California, Oregon Wave Climate at Selected Locations Along U. S. Coasts AUTHOR(S): Thompson, E. F. SOURCE: CERC Tech. Report 77-1, U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., 364 pp. DATE: 01/01/77 ABSTRACT: Summarizes significant heights and periods since 1948 for 19 wave

gage locations and provides data on ranges and annual and seasonal variations of wave climate. Staff and pressure- sensitive gages, generally short-term, were used to obtain the data. KEYWORDS: Coastal Processes wave climate, wave transformation California, Oregon, Mexico, South Coast Region, Subregion VII, Santa Barbara Cell Wave Climate at Selected Locations Along United States Coasts AUTHOR(S): Thompson, E. F. SOURCE: Tech. Report No. 77-1, U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Mississippi DATE: 01/01/77 ABSTRACT: Gives wave climate at five West Coast locations; data are mostly from 1962 to 1974 period, but includes pre- 1960's data as well. KEYWORDS: Oceanography & Meteorology, Coastal Processes wave climate California, South Central Region, South Coast Region, Subregion VII, Subregion VIII, Subregion IX Energy Spectra in Shallow U. S. Coastal Waters AUTHOR(S): Thompson, E. F. CERC Tech. Report 80-2, U. S. Army Corps of Engineers, Coastal SOURCE: Engineering Research Center, Ft. Belvoir, Virginia, 149 pp. DATE: 02/01/80 ABSTRACT: Report provides coastal engineers and researchers with wave energy spectra and spectral parameters for nine shallow water gage locations in the United States. Insight is provided on the physical meaning of shallow water spectra which are becoming increasingly important in coastal engineering work. Digital wave analyses for 3-12 months of data from each of 11 U.S. coastal gages are summarized and discussed. Water depths at gage sites were typically between 5 and 9 meters. Energy spectra parameters and distribution function of sea-surface elevations were also computed. KEYWORDS: Coastal Processes wave climate, wave transformation California, Oregon, Mexico, South Coast Region, Subregion IX, San Pedro Cell Shallow Water Surface Wave Elevation Distributions AUTHOR(S): Thompson, E. F. SOURCE: Journal of Waterway, Port, Coastal, and Ocean Division, Vol. 106, No. WW2, ASCE, N. Y., pp. 285-289 DATE: 05/01/80

ABSTRACT: Widely used engineering formulas dealing with wind-generated waves have been derived with the assumption that the distribution of instantaneous sea surface elevations is described by the Gaussian distribution law. When real wave conditions are not well described by the Gaussian law, the propriety of these formulas and designs based upon these formulas is questionable. The validity of the Gaussian assumption for shallow water surface wave elevation distribution is examined. A simple test for the non-Gaussian character of real waves is described and applied to U.S. coastal data collected in water depths of 5 to 9 meters. Some consequences of the non-Gaussian nature of waves on wave profiles and spectra KEYWORDS: Coastal Processes wave transformation, wave climate California, South Coast Region, Subregion IX, San Pedro Cell Nonrandom Behavior in Field Wave Spectra and Its Effect on Grouping of High Waves AUTHOR(S): Thompson, E. F. SOURCE: CERC Tech. Report 82-2, U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Mississippi DATE: 08/01/82 ABSTRACT: Wave measurements from relatively deep water field sites. Data (approximately one hour) represents high waves. Single-peaked spectra, and nearly constant significant heights and peak spectral periods are selected for analysis. Data represent actively growing waves at two sites and swell at the third. Analysis is done in both frequency and time domain. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California Original Structures of Beaches, Bars and Dunes AUTHOR(S): Thompson, W. O. SOURCE: Geologic Society of America Bulletin, Vol. 48, pp. 723-752 DATE: 01/01/37 ABSTRACT: Detailed descriptions are given for the texture and bedding characteristics of beach sands at Newport Beach. The bedding and sediments were correlated with daily changes of elevation. KEYWORDS: Geomorphology, Coastal Processes geology, geomorphic processes, grain size, littoral sediment, beaches California, South Coast Region, Subregion IX, San Pedro Cell Energetics of Breaking Waves Within the Surf Zone AUTHOR(S): Thornton, E. B.

Journal of Geophysical Research, Vol. 84, No. C8, pp. 4931-4938 SOURCE: DATE: 01/01/80 ABSTRACT: Wave conditions at three California beaches. KEYWORDS: Coastal Processes wave climate, wave transformation California Longshore Currents and Bed Shear Stress AUTHOR(S): Thornton, E. B.; Guza, R. T. SOURCE: Proceedings of the Conference on Directional Wave Spectra Applications, Berkeley, California, September 14-16, 1981; ASCE, N. Y., pp. 147-164 DATE: 01/01/81 ABSTRACT: Field measurements at Torrey Pines Beach during November 1978 were used to determine the bed shear stress coefficient. The measurement and error analysis emphasize the difficulty in making quantitative measurement of wave-induced momentum flux, particularly at locations such as Torrey Pines Beach where the angle of wave incidence is small, and typically has components approaching from both quadrants. KEYWORDS: Coastal Processes longshore current, wave climate, wave transformation California, San Diego Region, Subregion X, Transformation of Wave Height Distribution AUTHOR(S): Thornton, E. B.; Guza, R. T. SOURCE: Journal of Geophysical Research, American Geophysical Union, No. 88C10, pp. 5925-5938 DATE: 07/20/83 ABSTRACT: The transformation of wave heights during shoaling, including waves breaking in the surf zone, was measured with an extensive array of instruments in the field. The Rayleigh distribution is used to describe the random nature of the wave heights in a single-parameter transformation model based on energy flux balance. The energy losses associated with wave breaking are parameterized using observed breaking wave distributions coupled with a periodic bore dissipation model. KEYWORDS: Coastal Processes wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Breaking Wave Criteria AUTHOR(S): Thornton, E. B.; Wu, C. S. SOURCE: Coastal Engineering Abstracts 1984, 19th International Conference on Coastal Engineering, Houston, Texas, Sept. 3-7, 1984, ASCE, N. Y., pp. 48 - 49DATE: 01/01/84

ABSTRACT: Breaking wave height design curves are derived based on random wave measurements from both the laboratory and the field. The results are specified not only in terms of wave height parameters, but also the wave height distribution. Analysis includes results of two nearshore sediment transport studies at Torrey Pines and Santa Barbara, California. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, San Diego Region, Subregion VII, Subregion X, Santa Barbara Cell, Oceanside Cell Effects of Fire on Water AUTHOR(S): Tiedemann, A. R.; et al. SOURCE: General Tech Report No. WO-10, U. S. Department of Agriculture, Forest Service, Berkeley, California, 28 pp. DATE: 09/01/79 ABSTRACT: State of knowledge review of fire effects on water, including sedimentation, water quality, watersheds, erosion, and total discharge. KEYWORDS: Hydrology & Hydraulics fires, watersheds, watershed sediment, river discharge California Wave Statistics for Seven Deep Water Stations Along the California Coast AUTHOR(S): Timme, R. C. SOURCE: Interstate Electronics Corp., Anaheim, California, 20 pp. DATE: 01/01/73 ABSTRACT: not reviewed KEYWORDS: Coastal Processes wave transformation, wave climate California An Overview of the Causes and Effects of Sea Level Rise AUTHOR(S): Titus, J. G.; Barth, M. C. From: Greenhouse Effect and Sea Level Rise: A Challenge for SOURCE: This Generation, J. G. Titus and M. C. Barth, Eds.; Van Nostrand Reinhold Co., Publ., pp. 1-56 DATE: 01/01/84 ABSTRACT: This introductory chapter provides an overview of the entire project to encourage development of information necessary to adapt to sea level rise. Environmental Protection Agency has organized a project aimed at developing methods to study the effect of sea level rise and estimate the value of policies that prepare for this rise. KEYWORDS: Coastal Processes, Socioeconomics institutions/planning/mgmt., sea level change California

Planning for Sea Level Rise Before and After a Coastal Disaster

AUTHOR(S): Titus, J. G. SOURCE: In: Greenhouse Effect and Sea Level Rise: A Challenge for This Generation, M. Barth and J. Titus, Eds., Van Nostrand Reinhold, N. Y., pp. 253-269 DATE: 01/01/84 ABSTRACT: Examination of the impact of sea level rise on the decisions that must be made before and after a coastal disaster. The impact of sea level rise on coastal resorts and other property implications of recent federal policy changes, community interest in individual property owners' decisions, and decisions facing local government is discussed. Concludes with discussion of several policy changes that would enable coastal communities to better prepare for rising sea level. KEYWORDS: Coastal Processes institutions/planning/mgmt., sea level change, storm damage California Sea Level Rise and Wetlands Loss in the United States AUTHOR(S): Titus, J. G.; Henderson, T. R.; Teal, J. M. SOURCE: National Wetlands Newsletter, in collaboration with the National Wetlands Technical Council, Vol. 6, No. 5, pp. 3-6 DATE: 09/01/84 ABSTRACT: Adapted from a draft scoping paper which proposes a set of case studies to improve our understanding of the implications of sea level rise as it relates, primarily, to coastal wetlands. KEYWORDS: Coastal Processes environmental constraints, sea level change California Vertical Tectonics in the Elsinore Fault Zone AUTHOR(S): Todd, V.; Hoggatt, W. C. SOURCE: Abstract; Geological Society of America Annual Meeting, San Diego, California, p. 528 DATE: 01/01/79 ABSTRACT: The Elsinore Fault shows evidence of dip-slip movement. KEYWORDS: Geomorphology geology, neotectonics California, San Diego Region, Subregion X Source of Beach Sand At Santa Barbara, California As Indicated by Mineral Grain Studies AUTHOR(S): Trask, P. D. SOURCE: BEB Tech. Memo 28, U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C. DATE: 10/01/52

ABSTRACT: Mineralogical study of sand grains in Santa Barbara Harbor and along the coast west and north of the harbor for a distance of more than 250 miles. A series of 300 samples of beach, river, and offshore sands was collected and analyzed. A significant portion of the sand at Santa Barbara comes from а distance of more than 100 miles upcoast, moving around Point Conception. The distribution of minerals along the shore is described, and the mechanism of transport around promontories and the Santa Barbara breakwater is discussed. KEYWORDS: Coastal Processes, Geomorphology longshore transport, grain size, petrology, California, South Central Region, Subregion VI, Subregion VII, Santa Barbara Cell Bore Hole Studies of the Naturally Impounded Fill At Santa Barbara, California AUTHOR(S): Trask, P. D.; Scott, T. BEB Tech. Memo. 49, U. S. Army Corps of Engineers, Beach SOURCE: Erosion Board, Washington, D. C. DATE: 08/01/54 ABSTRACT: A series of seven bore holes was drilled in the accumulated fill area west of the breakwater, and the cores analyzed. The fill area overlays areas formerly covered by sea water. Information on how sand accumulates both offshore and on the beach was obtained. Analyses and results are provided. KEYWORDS: Coastal Processes, Geomorphology longshore transport, offshore/onshore transport, petrology, grain size, littoral sediment California, South Central Region, Subregion VII, Santa Barbara Cell Movement of Sand Around Southern California Promontories AUTHOR(S): Trask, P. D. SOURCE: BEB Tech. Memo. 76, U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., 66 pp. DATE: 06/01/55 ABSTRACT: A series of 19 profiles and 175 bottom samples off three rocky promontories show clearly that sand moves around these promontories. The sand moves in three distinct ways: along the beach and surf zone, in the water from sea level to depth of 30 feet, and between depths of 30-60 feet, beyond which relatively little sand moves. Sixty feet is the outer limit of ripple formation

and disturbance of bottom by waves. KEYWORDS: Coastal Processes beach profiles, littoral sediment, longshore transport, offshore/onshore transport, longshore current, nearshore currents California, South Central Region, Floods of March 1938 in Southern California AUTHOR(S): Troxell, H. C. SOURCE: Water-Supply Paper 844, U. S. Geological Survey, Washington, D. C., 399+ pp. DATE: 01/01/42 ABSTRACT: Vast collection of data on the 1938 floods in Southern California. Includes hydrologic and meteorological conditions, hyetographs, hydrographs, rainfall intensities, storm movement, isohyetal graphs as function of time, and more. Also includes photos, maps, graphs and tables. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging, storms/floods, watershed sediment California, South Central Region, South Coast Region, San Diego Region Floods of March 1938 in Southern California AUTHOR(S): Troxell, H. C. SOURCE: Water-Supply Paper 844, U. S. Geological Survey, Washington, D. С., 399+ pp. DATE: 01/01/42 ABSTRACT: A vast collection of hydrologic and meteoroligic data on the 1938 floods in Southern California. Includes hyetographs, hydrographs, rainfall intensities, storm movement, and isohyetal graphs as function of time; basic discharge records of: Santa Ana River Basin, San Gabriel River Basin, and Los Angeles River Basin; records of stage and discharge for: Tijuana River, Otav River, San Diego River, Sweetwater River, San Dieguito River, San Luis Rev River, Santa Margarita River, San Juan Creek, Aliso Creek, Santa Ana River, San Gabriel River Basin, Los Angeles River Basin, Ballona Creek, Topanga Creek, Malibu Creek, Santa Clara River, Ventura, Santa Ynez River, SAnta Maria River. Excellent source. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, stream gaging, storms/floods, watershed sediment California, South Central Region, South Coast Region, San Diego Region Summer Thunderstorms Over Southern California AUTHOR(S): Tubbs, A. M. SOURCE: Monthly Weather Review, Vol. 100, No. 11, pp. 799-807

DATE: 11/01/72 ABSTRACT: Used fire weather records to describe weather patterns associated with thunderstorms in Southern California. Found relationship with weather patterns which produced Arizona "monsoon" season. Thunderstorm activity is linked to tropical cyclone activity and upper level moisture influx. Includes data. KEYWORDS: Oceanography & Meteorology precipitation, storms/floods California, South Central Region, South Coast Region, San Diego Region Littoral Drift Study, Los Angeles, California AUTHOR(S): U. S. A. C. E., BEB SOURCE: BEB Bulletin, Vol. 2, No. 3, U. S. Army Corps of Engineers, Beach Erosion Board, Washingtion, D. C. DATE: 07/01/48 ABSTRACT: Discusses field operations to provide data for studying behavior of large beach-fills at Surfside and Sunset Beach colonies near Anaheim Bay Harbor and at the El Segundo area of Santa Monica Bay in California. KEYWORDS: Coastal Processes beach nourishment/dredging, longshore transport California, South Coast Region, Subregion VIII, Subregion IX, Santa Monica Cell, S. Santa Monica Reach, San Pedro Cell A Comparison of Deep Water Wave Forecasting AUTHOR(S): U. S. A. C. E., BEB SOURCE: BEB Bulletin, Vol. 9, No. 1, U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C. DATE: 01/01/55 ABSTRACT: A comparison of deep water wave forecasting by the Pierson-Neumann, the Darbyshire, and Sverdrup-Munk-Bretschneider methods with recorded waves for Point Arguello, California, October 26-27, 1950. Not reviewed. KEYWORDS: Coastal Processes wave climate, wave transformation California, South Central Region, Subregion VI, Subregion VII, Santa Ynez River Cell Annotated Bibliography of BEB and CERC Publications AUTHOR(S): U. S. A. C. E., BEB SOURCE: BEB Misc. Paper 1-68, U. S. Army Corps of Engineers, Beach Erosion Board, Washington, D. C., 141 pp. DATE: 07/01/68 ABSTRACT: Annotated bibliography. KEYWORDS: Coastal Processes institutions/planning/mgmt.

California

Shore Protection Research Project, GDM For Experimental Prototype Groin, U.S. Naval Air Station, Point Mugu, California AUTHOR(S): U. S. A. C. E., CERC SOURCE: U. S. Army Corps of Engineers, Coastal Engineering Research Center, Washington, D. C., 100+ pp. DATE: 05/01/68 ABSTRACT: Completed plans for a prototype groin field at study site. Includes structural detail. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt., longshore transport California, South Central Region, Subregion VII, Santa Barbara Cell Hydraulic Method Used For Moving Sand at Hyperion Beach Erosion Project, El Segundo, California AUTHOR(S): U. S. A. C. E., CERC CERC Misc. Paper No. 4-74, U. S. Army Corps of Engineers, SOURCE: Coastal Engineering Research Center, Ft. Belvior, Virginia, 66 pp. DATE: 06/01/74 ABSTRACT: This report describes a project at Los Angeles in 1947. Sandhills (relic dunes) were leveled, and the sand used to widen the beach against erosion. The project extended from El Segundo to Venice. The report describes the process in detail, shows photos and drawings of the equipment and work, and also shows aerial progress photos of the area. Recommendations are presented for use of the method in other areas. KEYWORDS: Coastal Processes aerial photography, beach nourishment/dredging California, South Coast Region, Bibliography of Publications of the Coastal Engineering Research Center and Beach Erosion Board to July 1983 AUTHOR(S): U. S. A. C. E., CERC SOURCE: CERC/BEB, U. S. Army Corps of Engineers, Coastal Engineering Research Center, Vicksburg, Mississippi, pp. 1-1 to C-5 DATE: 03/01/84 ABSTRACT: Annotated bibliography of publications, final report. KEYWORDS: Coastal Processes institutions/planning/mgmt. California Shore Protection Manual, Vols. I and II AUTHOR(S): U. S. A. C. E., CERC/WES SOURCE: CERC/WES, U. S. Army Corps of Engineers, Vicksburg,

Mississippi,

Fourth Edition, U. S. Govt. Printing Office, Washington, D. C.; Vol. 1, pp. 1-1 to D-19 DATE: 01/01/84 ABSTRACT: Shore processes and methods of shore protection in two volumes. KEYWORDS: Coastal Processes coastal structures, littoral sediment, longshore transport, shore protection, wave climate, wave transformation California History of Past Floods, Santa Ana River and Tributaries, California, 1771 to 1937-38 AUTHOR(S): U. S. A. C. E., LAD SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, Unpublished Report DATE: 04/23/38 ABSTRACT: This unpublished, uncatalogued report (a carbon copy) contains a narrative description of floods in the Santa Ana basin since 1771. KEYWORDS: Hydrology & Hydraulics storms/floods California, South Coast Region, Subregion IX, San Pedro Cell Shore Protection Report on Survey of Anaheim Harbor, California Second Interim Report AUTHOR(S): U. S. A. C. E., LAD SOURCE: U. S. Army Corps of Engineers, Los Angeles District, Unpublished Report, Los Angeles, California DATE: 07/25/52 ABSTRACT: Appendix 3 has wind and wave data summary for South Coast area. Includes meteorological maps. KEYWORDS: Oceanography & Meteorology, Coastal Processes wave climate, wind California, South Coast Region, Subregion IX, San Pedro Cell, S. San Pedro Reach Coast of California, Carpinteria to Point Mugu, Beach Erosion Control Study, Appendix 4 AUTHOR(S): U. S. A. C. E., LAD SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, House Document 29, Appendix I, 82nd Congress, 1st Session, pp. 63-84 DATE: 10/24/52 ABSTRACT: Texture and petrologic data is given for samples collected along the beaches and rivers in the study area. KEYWORDS: Geomorphology, Coastal Processes geology, grain size, littoral sediment, maps, petrology, river-bed sediment

California, South Central Region, Subregion VII, Santa Barbara Cell Coast of California, Carpinteria to Point Mugu, Beach Erosion Study, Appendix I AUTHOR(S): U. S. A. C. E., LAD SOURCE: House Document No. 29, 83d Congress, 1st Session, 92 pp. DATE: 10/24/52 ABSTRACT: An estimate is given for sand discharge to the beaches from the drainage area between Sand Point and the Ventura River. The estimate is based on the sedimentation rate of the watershed above Rindge Reservoir on Malibu Creek. This rate was applied to the estimated part of the drainage area containing sand producing rock. The estimate is 30,000 cy/yr. Two estimates are also given for sand discharge to the beaches based on sedimentation rates supplied by the California Forest and Range Experiment Station and the assumption that 50% will reach the ocean. One estimate is for the Ventura River, 300,000 cy/yr, while the other is for the Santa Clara River, 1,400,000 cy/yr. KEYWORDS: Hydrology & Hydraulics, Coastal Processes river sediment discharge, watershed sediment, littoral sediment, sedimentation California, South Central Region, Subregion VII, Santa Barbara Cell Interim Report on Harbor-Entrance Improvement, Camp Pendleton, California AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 19 pp. DATE: 03/25/53 ABSTRACT: A letter report summarizing and analyzing data, discussing proposed plans, and recommending action. KEYWORDS: Coastal Processes hydrographic surveys, institutions/planning/mgmt., longshore transport, wave climate, coastal structures California, San Diego Region, Subregion X, Oceanside Cell River and Harbor Improvement, GDM No. 1, Playa del Rey Inlet and Harbor, Venice, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 11/01/56 ABSTRACT: A recommended plan for construction of the Playa del Rey inlet and harbor project, which includes the construction of general navigation facilities: a new jetty, modifying existing jetty, concrete bases for

aids-to-navigation; dredging; revetments; and deposition of dredged material. KEYWORDS: Coastal Processes coastal structures, growth potential/recreation, institutions/planning/mgmt., longshore transport, wave climate, beach nourishment/dredging California, South Coast Region, Subregion VIII, Santa Monica Cell River and Harbor Improvement, GDM No. 1 for Harbor and Shore Protection Works Near Port Hueneme, California (Channel Islands Harbor) AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 80 pp. DATE: 05/01/57 A recommended plan for the establishment of a harbor for ABSTRACT: lightdraft vessels about one mile northwest of the existing harbor of Port Hueneme, and shore protection works including dredging. KEYWORDS: Coastal Processes beach nourishment/dredging, beach profiles, coastal structures, shore protection, wave climate California, South Central Region, Subregion VII, Santa Barbara Cell Interim Report on Feasibility of Locating a Proposed Recreational Harbor Entrance at Camp Del Mar Boat Basin, Camp Pendleton, Calif. AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: River and Harbor Improvement, U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 10/01/58 ABSTRACT: Report of an interim study to determine the feasibility of developing a civilian boat basin adjacent to the Camp Del Mar boat basin, with the recreational harbor entrance located in the lee of the extended north jetty at Camp Del Mar so that the full operational utilization of the Camp Del Mar Boat Basin would not be impaired. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt., longshore transport, wave climate California, San Diego Region, Subregion X, Planning Report, Port Hueneme, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 8 pp. DATE: 01/01/59 ABSTRACT: Description of a project to construct a small-craft harbor with berthing facilities for about 500 recreational and fishing boats, and for shore protection.

KEYWORDS: Coastal Processes coastal structures, growth potential/recreation, institutions/planning/mgmt., shore protection California, South Central Region, Subregion VII, Santa Barbara Cell Beach Erosion Control Report on Cooperative Study of Orange County, California, Appendix V, Phase I AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 44+ pp. DATE: 06/15/59 ABSTRACT: This study investigates shore erosion from vicinity of Dana Point to San Mateo Creek at County Line, including Doheny Beach State Park, Capistrano Beach Colony, and upper San Clemente segment. Includes data. KEYWORDS: Coastal Processes beach nourishment/dredging, beach profiles, shoreline changes, shore protection, wave climate, coastal erosion problems California, San Diego Region, Subregion X, Oceanside Cell Cooperative Study of San Diego County, California, Appendix IV, Phase 2 AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: Beach Erosion Control Report, U. S. Army Corps of Engineers, Los Angeles District, California, 60 pp. DATE: 03/01/60 ABSTRACT: Report of a beach erosion survey study to determine the littoral characteristics of the entire ocean shoreline of San Diego County, and the most effective and economical means of preventing the erosion of this shoreline. Specific emphasis on public beaches and federally-owned frontage. Includes data. KEYWORDS: Coastal Processes beaches, coastal erosion, littoral sediment, longshore transport, shoreline changes, shore protection California, San Diego Region, Subregion X Beach Erosion Control Report on Cooperative Study of Coast of Southern California, Point Conception to Mexican Boundary, App. VII AUTHOR(S): U. S. A. C. E., LAD; Southern California Interim Report; U. S. Army Corps of Engineers, Los Angeles SOURCE: District, California, 60+ pp. DATE: 04/05/60 ABSTRACT: A brief description of the area, and a summary and description of the field work accomplished and data collected during first year of study in all

counties. KEYWORDS: Coastal Processes beach profiles, coastal erosion problems, shore protection, littoral sediment, wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region River and Harbor Improvement, GDM for Shore Protection Works Near Oceanside, California AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 24+ pp. DATE: 10/01/60 ABSTRACT: Initial phase of shore protection plans and specifications at Oceanside. Includes data. KEYWORDS: Coastal Processes aerial photography, coastal structures, institutions/planning/mgmt., coastal erosion problems, shore protection, wave climate California, San Diego Region, Subregion X, Oceanside Cell GDM for Rehabilitation of North Breakwater and Continuing Maintenance of Morro Bay Harbor, California AUTHOR(S): U. S. A. C. E., LAD; San Luis Obispo County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 100+ pp. DATE: 12/01/60 A recommended plan for reconstructing the north breakwater to ABSTRACT: require only minor maintenance, and dredging 1,000,000 cubic yards and depositing it on the peninsula south of the harbor entrance. Includes data on dredging and waves, and sand movement diagrams. KEYWORDS: Coastal Processes coastal structures, littoral sediment, longshore transport, sand entrapment, wave transformation California, South Central Region, Subregion VI, Santa Maria River Cell Special Interim Report on Ventura Area, Beach Erosion Control Report on Coast of Southern California, Appendix VII AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: Contract No. W-04-193-ENG.-5196, U. S. Army Corps of Engineers, Los Angeles District, California, 77 pp. DATE: 08/10/61 ABSTRACT: The purpose of the study was to determine the littoral characteristics of the Ventura County shoreline between the Ventura and Santa Clara Rivers, and the most effective and economical means of preventing further erosion of this shoreline, with emphasis on the public beach frontage. KEYWORDS: Coastal Processes

beach profiles, coastal erosion problems, coastal structures, longshore transport, shoreline changes, shore protection California, South Central Region, Subregion VII, Santa Barbara Cell Geology, Drainage and Littoral Materials, Appendix B AUTHOR(S): U. S. A. C. E., LAD SOURCE: Beach Erosion Control Report on Coast of Calif., Appx. VII, U. S. Army Corps of Engineers, Los Angeles District, Los Angeles House Document 458, 87th Congress, 2nd Session, pp. 50-61 DATE: 08/10/61 ABSTRACT: Special interim report on the Ventura area. Data on the sand content of the area's geologic formations and remarks on beach sand texture and mineralogy. KEYWORDS: Geomorphology, Coastal Processes geology, littoral sediment, maps, grain size, institutions/planning/mgmt. California, South Central Region, Subregion VII, Santa Barbara Cell River and Harbor Improvement Survey Report for Navigation, Dana Point Harbor, Dana Point, California AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 09/15/61 ABSTRACT: Investigates need for light-draft vessel harbor facilities at Dana Point for recreational boating and sport fishing, as well as a need for a harbor of refuge. KEYWORDS: Coastal Processes beach profiles, coastal structures, institutions/planning/mgmt., shoreline use, storms/floods, wave climate California, San Diego Region, Subregion X, Oceanside Cell River and Harbor Improvement, Review Report for Navigation, Santa Barbara County, California AUTHOR(S): U. S. A. C. E., LAD; Santa Barbara County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 100+ pp. DATE: 10/01/61 ABSTRACT: Need determination for harbor facilities for small-craft and light-draft vessels. Construction of breakwaters and dredging to accommodate 2700 small craft would also provide sand bypassing to downcoast beaches. Includes data on structures, geology, shoreline change, beach profiles, waves, oceanography, and socio-economics. KEYWORDS: Coastal Processes, Socioeconomics beach nourishment/dredging, beach profiles, coastal structures, growth potential/recreation, shoreline changes, wave climate

California, South Central Region,

Coast of Southern California, Beach Erosion Control Report on Cooperative Study of Orange County, California, Appendix V, Phase 2 AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 250+ , qq DATE: 03/01/62 ABSTRACT: This is a continuation study of Orange County, California, Appendix V, Phase 1 concerning the shore segment of Orange County between the mouth of the San Gabriel River, and the entrance channel to Newport Bay. The objective of the study is to determine the cause of shoreline changes and the most suitable corrective measures. Includes data. KEYWORDS: Coastal Processes beach profiles, coastal structures, longshore transport, shore protection, wave climate, wave transformation California, South Coast Region, Subregion IX, San Pedro Cell Beach Erosion Control Report on Cooperative Study of Orange County, California AUTHOR(S): U. S. A. C. E., LAD SOURCE: U. S. Army Corps of Engineers, Los Angeles District, Los Angeles California DATE: 03/01/62 Appendix D contains wave and wind data for Orange County ABSTRACT: area. KEYWORDS: Oceanography & Meteorology, Coastal Processes wave climate, wind California, South Coast Region, Subregion IX, San Pedro Cell, S. San Pedro Reach Report on Engineering Study of San Nicolas Island, California AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: For: Southwest Division, Bureau of Yards and Docks, U. S. Navy, San Diego, California, 75+ pp. DATE: 04/30/62 ABSTRACT: Engineering study of San Nicolas Island. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal structures, hydrographic surveys, institutions/planning/mgmt., wave climate, wave transformation California, San Diego Region, Subregion X Coast of Southern California - Special Interim Report on the Ventura Area, Cooperative Beach Erosion Control Study AUTHOR(S): U. S. A. C. E., LAD SOURCE: House Document No. 458, 87th Congress, 2d Session, 80 pp. DATE: 06/25/62

ABSTRACT: Estimates of sand discharge to the beaches are given for the Ventura and Santa Clara Rivers. This is based on sedimentation rates obtained from the California Forest and Range Experiment Station, USDA for the watershed and the estimate that 50% will reach the ocean. KEYWORDS: Hydrology & Hydraulics, Coastal Processes river sediment discharge, littoral sediment, watershed sediment, sedimentation California, South Central Region, Subregion VII, Santa Barbara Cell Review Report for Navigation, Port San Luis (San Luis Obispo Harbor), California (Revised) AUTHOR(S): U. S. A. C. E., LAD; San Luis Obispo County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 39+ pp. DATE: 08/01/62 ABSTRACT: The need is determined for harbor facilities for deep-draft and shallow-draft vessels at Port San Luis. It was found that an economically feasible harbor could be provided by construction of breakwaters and removal of rock pinnacles and dredging to accommodate 1500 small craft and 3 deepdraft berths and to serve as a harbor of refuge for light-draft vessels. Includes data on: structures design, geology, socio-economics, waves, and environmental impacts. Revised from previous report dated 12/61. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, environmental constraints, California, South Central Region, Subregion VI, Santa Maria River Cell Cooperative Study of Coast of Southern California, Point Conception to Mexican Boundary, Appendix VII, 2nd Interim Report AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: Beach Erosion Control Report, U. S. Army Corps of Engineers, Los Angeles District, California, 18+ pp. DATE: 08/24/62 ABSTRACT: The second interim report sets forth the work accomplished since submission of the first interim report of the Phase 2 Appendix VII study in April 1960. Includes photographs, baselines and profiles, analysis of beach and offshore sand samples at selected profiles, and statistical wave data for selected offshore stations. KEYWORDS: Coastal Processes aerial photography, beach profiles, hydrographic surveys, shoreline changes, wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region

Beach Erosion Control Report on Cooperative Study of Coast of Southern California, Point Conception to the Mexican Border AUTHOR(S): U. S. A. C. E., LAD SOURCE: Second Interim Report, U. S. Army Corps of Engineers, Los Angeles District, California, 18+ pp. DATE: 09/24/62 ABSTRACT: Contains a limited wave data summary for Southern California (see Appendix A). Includes beach profiles. KEYWORDS: Oceanography & Meteorology, Coastal Processes wave climate, beach profiles California, South Central Region, South Coast Region, San Diego Region River and Harbor Improvement Survey Report for Navigation, Oceanside Harbor, Oceanside (Camp Pendleton), California AUTHOR(S): U. S. A. C. E., LAD; San Diego County U. S. Army Corps of Engineers, Los Angeles District, SOURCE: California, 27+ pp. DATE: 06/01/63 Investigation considers federal maintenance of the general ABSTRACT: navigation features of the locally-constructed Oceanside Harbor. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt. California, San Diego Region, Subregion X, Oceanside Cell Report on Cooperative Beach Erosion Investigation, Malibu - Santa Monica Area, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: For: California State Dept. of Water Resources and Dept. of Pub. Works, Divn. of Highways; U. S. Army Corps of Engineers, Los Angeles District, California, 100+ pp. DATE: 08/01/63 ABSTRACT: Report on the feasibility of marine locations for the proposed State Route 60 freeway from Santa Monica to Malibu Point. KEYWORDS: Coastal Processes coastal structures, coastal erosion, wave climate, wave transformation, institutions/planning/mgmt., shoreline use California, South Coast Region, Subregion VIII, Santa Monica Cell River and Harbor Improvement, GDM No. 2, Redondo Beach King Harbor, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 03/01/64 ABSTRACT: The recommended plan provides for improvement of existing rubble-mound breakwater. KEYWORDS: Coastal Processes

coastal structures, institutions/planning/mgmt., wave climate California, South Coast Region, Subregion VIII, Santa Monica Cell Special Study of City of San Diego, Beach Erosion Control Report on Coast of Southern California, Appendix VII AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 53+ pp. DATE: 06/01/64 ABSTRACT: Report is a special interim survey report concerning beach erosion control. The purpose of the study is to determine the littoral characteristics of the shoreline within the City of San Diego. The most effective and economical means of prevent- ing further erosion of this shoreline is identified with special emphasis on the public beach frontage. KEYWORDS: Coastal Processes beach profiles, coastal structures, littoral sediment, longshore transport, shoreline changes, coastal erosion problems California, San Diego Region, Subregion X, River and Harbor Improvement Design Analysis for Shore Protection Works at Ventura-Pierpont Bay Area, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 15 pp. DATE: 06/01/64 ABSTRACT: Phase 2 construction; groins 5 and 7. Project includes nine stone groins and placement of 1,534,200 cubic yards of material on public beach. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, institutions/planning/mgmt., shore protection California, South Central Region, Subregion VII, Santa Barbara Cell Design Analysis Beach Erosion Control Project, Doheny Beach State Park, California AUTHOR(S): U. S. A. C. E., LAD; Orange County Appendix V, Phase 1, Orange County, California, Phase 2 SOURCE: Construction; U. S. Army Corps of Engineers, Los Angeles District, California, 7+ pp. DATE: 04/01/65 ABSTRACT: A brief analysis of shore protection to be constructed at Doheny Beach State Park. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal erosion problems, institutions/planning/mgmt., shore protection California, San Diego Region, Subregion X, Oceanside Cell

River and Harbor Improvement Report on Analysis of Wave Activity, Mission Bay Harbor, San Diego, California AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 70+ pp. DATE: 05/01/65 ABSTRACT: Recommendation that design deficiencies exist at Mission Bay in the channel and in Quivera Basin and Glen Rick Cove; and should be rectified. Includes Wave Study at Mission Bay, California, prepared by Marine Advisors. September 1963. KEYWORDS: Coastal Processes coastal structures, wave climate, wave transformation California, San Diego Region, Subregion X, Mission Bay Cell Navigation Improvement, GDM No. 1 for Dana Point Harbor, Dana Point, California AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 200+ , αα DATE: 09/30/65 ABSTRACT: Recommendation of a plan that provides for construction of a small-craft harbor consisting of two rubble-mound breakwater channels, turning basin, and an anchorage area. Includes data. KEYWORDS: Coastal Processes coastal structures, hydrographic surveys, institutions/planning/mgmt., wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Shore Protection Improvement, GDM for Beach Erosion Control, Ventura-Pierpont Bay Area, California, Coast of Southern California, App. VII AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 44 pp. DATE: 01/01/66 ABSTRACT: Phase 3 construction; groins 8 and 9. KEYWORDS: Coastal Processes coastal erosion problems, coastal structures, shore protection California, South Central Region, Subregion VII, Santa Barbara Cell Special Study of City of Long Beach (Alamitos Bay), Beach Erosion Control Report on Coast of Southern California, Appendix VII AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: Revised Sept. 1967, U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 04/01/66 ABSTRACT: The study proposes a plan of protection that deposits coarse

material at bayshore site. No federal participation because subject problem is outside purview of beach erosion control legislation KEYWORDS: Coastal Processes aerial photography, beach profiles, coastal erosion problems, shore protection, beach nourishment/dredging California, South Coast Region, Subregion IX, San Pedro Cell Inspection Tour of Shoreline, Santa Barbara to Imperial Beach AUTHOR(S): U. S. A. C. E., LAD; California State Dept. of Water Resources SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 06/01/66 Inspection of shoreline projects and problems, including ABSTRACT: smallcraft harbors and shoreline protection. Included work-shop discussions of project developement including the fiscal, legislative, and legal problems involved. KEYWORDS: Coastal Processes aerial photography, coastal structures, institutions/planning/mgmt., shoreline use California, South Central Region, South Coast Region, San Diego Region GDM for Beach Protection and Widening from Redondo Beach Breakwater to Malaga Cove, Los Angeles County, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County Shore Protection Impr., Appendix II Coast of California, Point SOURCE: Mugu to San Pedro Breakwater, U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 12/01/66 ABSTRACT: A recommended plan of improvement consisting of widening the beach by artificial placement of beach material. KEYWORDS: Coastal Processes beach profiles, coastal structures, longshore transport, shoreline use, wave climate, shore protection California, South Coast Region, Subregion VIII, Santa Monica Cell Public Hearing on Survey Report for Beach Erosion Control, City of Santa Monica, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 04/20/67 ABSTRACT: Comments of City of Santa Monica and Southern California Planning

Congress regarding maintenance of current breakwater and potential alternative plans. Includes copy of Moffatt and Nichol, Engineers report. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt., shoreline use, coastal erosion problems, shore protection, shoreline changes California, South Coast Region, Subregion VIII, Santa Monica Cell Plan of Survey for Survey Report on Ventura Marina, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 17 pp. DATE: 04/24/67 ABSTRACT: Presents a plan of improvement including construction of an offshore breakwater to provide protection to the harbor entrance. Lists reports for available data. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt. California, South Central Region, Subregion VII, Santa Barbara Cell DM No. 2, Supplementary Design for San Diego River and Mission Bay Improvement, Pacific Ocean to Station 70+00 AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: In: San Diego River and Mission Bay, California Flood Control, U.S. Army Corps of Engineers, Los Angeles District, California, 18+ pp. DATE: 05/01/67 ABSTRACT: Recommends the construction of the south jetty extension and dredging of San Diego River as a justifiable correction of a deficiency in design of the San Diego River and Mission Bay project. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt. California, San Diego Region, Subregion X, Mission Bay Cell Beach Erosion Control Report, Cooperative Study of Coast of Southern California, Cape San Martin to Mexican Border, App. VII, Final Report AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 100+ pp. DATE: 06/01/67 ABSTRACT: The appendix is a summary and description of special and general studies of the field work accomplished and data collected in 1961-1967 during the cooperative beach erosion and shore protection studies. Includes data. Lists all appendices completed for this cooperative study contract. KEYWORDS: Coastal Processes beach profiles, coastal structures, littoral sediment, shoreline changes, shore

protection, wave climate California, South Central Region, DM for Beach Stabilization, Stage 2 Construction in the Segment From Santa Ana River to Newport Pier, Orange County, California AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: Shore Protection Improvement, Appendix V, Phase 2, Coast of California, San Gabriel River to Newport Bay; U. S. Army Corps of Engineers, Los Angeles District, California, 50 pp. DATE: 08/01/67 ABSTRACT: Design Memorandum for beach stabilization (groins and beach fill), modified. KEYWORDS: Coastal Processes beach profiles, coastal structures, longshore transport, shoreline changes, beach nourishment/dredging, coastal erosion problems California, South Coast Region, Subregion IX, San Pedro Cell Shore Protection Research Project, GDM for Experimental Prototype Groin, U. S. Naval Air Station, Point Mugu, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 100+ pp. DATE: 01/01/68 ABSTRACT: The Coastal Engineering Research Center, Washington, D. C., plans to construct an experimental prototype groin field to improve functional and structural criteria for the design of groins. Initially, a single groin will be constructed about 400 feet downcoast of Arnold Road in Ventura County on the shoreline fronting Point Mugu Naval Air Station. Groin sections could be added or removed to vary the height and/or length and permeability within the limits of the structure. Close surveillance of structure and shoreline will be maintained throughout the experiment for approximately four years, and possibly a maximum period of ten years. Includes data. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt., longshore transport California, South Central Region, Subregion VII, Subregion VIII, Santa Barbara Cell, S. Santa Barbara Reach Survey Report for Navigation Improvement, Ventura Marina, Ventura County, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 100+ pp.

DATE: 03/01/68 ABSTRACT: Determination of a need to improve the entrance at Ventura Marina to provide safe navigation conditions for small craft using the harbor. Includes nine data appendices. KEYWORDS: Coastal Processes coastal structures, geology, growth potential/recreation, longshore transport, shoreline changes, wave climate California, South Central Region, Subregion VII, Santa Barbara Cell Reconnaissance Report on Channel Islands Harbor at Ventura County, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 20 pp. DATE: 03/01/68 ABSTRACT: This study was to determine whether expansion of the existing facilities of the Channel Islands Harbor meets the small-craft berthing demand of the area tributary to the harbor is economically feasible. KEYWORDS: Coastal Processes coastal structures, growth potential/recreation, institutions/planning/mgmt. California, South Central Region, Subregion VII, Santa Barbara Cell Navigation Improvement Survey Report for Navigation, Ventura Marina, Ventura County, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County U. S. Army Corps of Engineers, Los Angeles District, SOURCE: California, 100+ pp. DATE: 03/29/68 ABSTRACT: A study of the need for improvement of the entrance at Ventura Marina to provide safe navigation conditions for small-craft utilization of the harbor KEYWORDS: Coastal Processes coastal structures, growth potential/recreation, longshore transport, shoreline changes, wave climate California, South Central Region, Subregion VII, Santa Barbara Cell Survey Report for Navigation Improvement, Ventura Marina, Ventura County, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 150+ pp. DATE: 03/29/68 ABSTRACT: Determination of a need for improvement of the entrance at Ventura

Marina to provide safe navigation conditions for small craft using the harbor. Includes maintaining general navigation features constructed by local interests, and modifications to be made by a) an offshore breakwater, b) dredging, and c) recrea- tional fishing facilities. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, hydrographic surveys, institutions/planning/mgmt., longshore transport, wave climate California, South Central Region, Survey Report for Navigation, Ventura Marina AUTHOR(S): U. S. A. C. E., LAD SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 33+ pp. DATE: 03/29/68 ABSTRACT: Survey report on Ventura Marina. Includes overview of sediment problems and wave problems along the coast. Appendices give data or sediment transport to the coast from Santa Barbara to Mugu Lagoon. KEYWORDS: Hydrology & Hydraulics, Coastal Processes river sediment discharge, storms/floods, storm waves California, South Central Region, Subregion VII, Santa Barbara Cell Review Report for Navigation Improvement, Port Hueneme Harbor, Ventura County, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 60+ pp. DATE: 04/01/68 ABSTRACT: Preliminary recommendation for improvement of existing deepdraft harbor at Port Hueneme by deepening the central basin; widening, deepening, and extending the southermost interior channel to a depth of 35 feet. Includes data in appendices. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt., shore protection California, South Central Region, Subregion VII, Santa Barbara Cell DM, Annex A for Beach Stabilization, Stage 2 Construction in the Segment From Santa Ana River to Newport Pier, Orange County California AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: Shore Protection Improvement, San Gabriel River to Newport Bay, U. S. Army Corps of Engineers, Los Angeles District, California, 31 pp. DATE: 07/01/68 ABSTRACT: Recommendation for additional work (groin and beach fill) to be

undertaken to preclude further damage to the shoreline. Includes placement of sand fill, construction of groin, and monitoring. KEYWORDS: Coastal Processes beach nourishment/dredging, beach profiles, coastal erosion problems, coastal structures, shore protection California, South Coast Region, Subregion IX, San Pedro Cell Shore Protection Impr. Design Memo. for Stage 3 Construction, Beach Stabilization with Groins and Beach Fill at Newport Beach, Orange County, Calif. AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 50+ , qq DATE: 01/01/69 ABSTRACT: Recommendation in this DM includes construction of four 300foot rubble-mound groins at Newport Beach, and fill of the downcoast side of the groins with a total of 210,000 cubic yards of sand hauled from accreting adjacent beaches or other areas. KEYWORDS: Coastal Processes beach nourishment/dredging, beach profiles, coastal structures, coastal erosion problems, longshore transport, wave climate California, South Coast Region, Subregion IX, San Pedro Cell Report on Floods of January and February 1969 in Southern California AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 51+ pp. DATE: 01/01/69 Structural and other damages, and their costs. Includes ABSTRACT: emergency and flood fighting work. Details in separate appendices. KEYWORDS: Coastal Processes, Socioeconomics storm damage, storms/floods California, South Central Region, South Coast Region, San Diego Region Flood Plain Information, Sweetwater River, San Diego County, California AUTHOR(S): U. S. A. C. E., LAD SOURCE: For: San Diego County; U. S. Army Corps of Engineers, Los Angeles District, California, 33+ pp. DATE: 02/01/69 Flood informaion for the Sweetwater River. Includes some ABSTRACT: peak discharge data, but more complete information is found in U.S. Geological Survey reports. Gives a good historical perspective. KEYWORDS: Hydrology & Hydraulics river discharge, watersheds, storms/floods California, San Diego Region, Subregion X

Cooperative Research and Data Collection Program of Coast of Southern California, Cape San Martin to Mexican Border, Three Year Report, 1964-1966 AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: Beach Erosion Control Report; U. S. Army Corps of Engineers, Los Angeles District, California, 48 pp. DATE: 03/01/69 ABSTRACT: Report presents the research and data collection program on the Southern California shoreline to determine areas of active or potential erosion, to obtain data on waves and shore processes, and to identify problems. Work accomplished for the three year period is described. Includes data. KEYWORDS: Coastal Processes beach profiles, coastal erosion problems, littoral sediment, longshore transport, offshore/onshore transport, shore protection California, South Central Region, Plan of Survey for Cambria-San Simeon Bay, California AUTHOR(S): U. S. A. C. E., LAD; San Luis Obispo County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 20 , αα DATE: 05/01/69 ABSTRACT: Feasibility of new construction at Santa Rosa Creek, Cambria, or San Simeon Bay for a light draft harbor. No data. KEYWORDS: Coastal Processes institutions/planning/mgmt. California, South Central Region, Subregion VI, Morro Bay Cell Revised Plan of Survey for Review Report on Sunset Harbor, California AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 30+ pp. DATE: 07/31/69 ABSTRACT: A report of a preliminary examination of the site of Sunset and Bolsa Chica harbors. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt. California, South Coast Region, Subregion IX, San Pedro Cell Navigation Improvement, GDM No. 1 for Port San Luis, California AUTHOR(S): U. S. A. C. E., LAD; San Luis Obispo County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 100+ pp. DATE: 08/01/69 ABSTRACT: A project plan for the harbor at Port San Luis. Includes data on structures' design, socio-economics, waves, and geology. (Includes Chatham, WES Tech. Report H-69-6).

KEYWORDS: Coastal Processes, Socioeconomics coastal structures, geology, growth potential/recreation, institutions/planning/mgmt., shoreline use, wave transformation California, South Central Region, Subregion VI, Santa Maria River Cell Flood Plain Information, Calleguas Creek, Ventura County California AUTHOR(S): U. S. A. C. E., LAD SOURCE: For: Ventura County; U. S. Army Corps of Engineers Los Angeles District, California, 59+ pp. DATE: 09/01/69 ABSTRACT: Flood information for Calleguas Creek. Includes historical accounts, discharge data, storm hydrographs, and maximum flood discharge. KEYWORDS: Hydrology & Hydraulics river discharge, watersheds, storms/floods California, South Coast Region, Subregion VII, Santa Barbara Cell Survey Report for North Coast of Los Angeles County, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 30+ pp. DATE: 11/01/69 ABSTRACT: Investigation of the need for a harbor of refuge along this 50-mile coastline. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt. California, South Coast Region, Subregion VIII, Santa Monica Cell River and Harbor Improvements Report on Wave Action in Mission Bay Harbor, San Diego River and Mission Bay, California AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 12/01/69 ABSTRACT: Report in lieu of a general design memorandum on surge conditions within Mission Bay at Glen Rick Cove and Quivera Basin, and erosion at Glen Rick Cove. Recommendation for no action. Includes WES Tech. Report H-69-8 (Ball, J. W.; Brasfeild, C. W.). KEYWORDS: Coastal Processes beach nourishment/dredging, wave climate, wave transformation California, San Diego Region, Subregion X, Mission Bay Cell Navigation Improvement, GDM No. 1, Ventura Marina, Ventura County, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 100 pp. DATE: 01/01/70 ABSTRACT: Describes a recommended plan for improvement and maintenance at

Ventura Marina, including construction and dredging. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, growth potential/recreation, hydrographic surveys, wave climate California, South Central Region, Subregion VII, Santa Barbara Cell Flood Plain Information, Santa Ynez River (Lompoc to the Pacific Ocean) Santa Barbara County, California AUTHOR(S): U. S. A. C. E., LAD For: Santa Barbara County Flood Control and Water Conservation SOURCE: District; U. S. Army Corps of Engineers, Los Angeles District, California, 52+ pp. DATE: 01/01/70 ABSTRACT: Flood information for the Santa Ynez River near the coast. Includes discharge data, peak flows (120,000 cfs in 1907) and a moderately good flood history. KEYWORDS: Hydrology & Hydraulics river discharge, storms/floods, watersheds California, South Central Region, Subregion VI, Santa Ynez River Cell Supplementary GDM For Beach Protection and Widening From Redondo Beach Breakwater to Malaga Cove, Los Angeles County, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: Shore Protection Improvement, Appendix II Coast of California, Point Mugu to San Pedro Breakwater, U. S. Army Corps of Engineers, Los Angeles District, California, 10+ pp. DATE: 02/01/70 ABSTRACT: Supplementary design memorandum. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, institutions/planning/mgmt., shore protection California, South Coast Region, Subregion VIII, Santa Monica Cell Shore Protection Improvement, DM for Sunset Cliffs-Segment B, San Diego County, California AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 23+ pp. DATE: 04/01/70 ABSTRACT: Report on bluff stabilization with revetments, dikes, and the sealing of caves at the Ocean Beach area, City of San Diego. KEYWORDS: Coastal Processes cliff sediment, coastal erosion problems, coastal structures, institutions/planning/mgmt., shore protection, wave climate California, San Diego Region, Subregion X, Mission Bay Cell

Flood Plain Information, San Juan Creek (including Arroyo Trabuco and Oso

Creek), Orange County, California AUTHOR(S): U. S. A. C. E., LAD SOURCE: For: Orange County; U. S. Army Corps of Engineers, Los Angeles District, California, 51+pp. DATE: 11/01/70 ABSTRACT: Basic flood information gives an historical account and includes discharge (peak) data for some floods. KEYWORDS: Hydrology & Hydraulics river discharge, watersheds, storms/floods California, San Diego Region, Subregion X, Oceanside Cell Reconnaissance Report, Shoreline Erosion at Point Loma Light Station, San Diego, California AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 10+ pp. DATE: 11/09/70 ABSTRACT: Study determined need for erosion control measures, and developed a preliminary plan of improvement and a work program. Includes costs. KEYWORDS: Coastal Processes coastal erosion problems, institutions/planning/mgmt., shore protection California, San Diego Region, Subregion X, Silver Strand Cell Cooperative Research and Data Collection Program, Coast of Southern California, Three Year Report, 1967-1969 AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: Beach Erosion Control Study; U. S. Army Corps of Engineers, Los Angeles District, California, 21+ pp. DATE: 12/01/70 ABSTRACT: Cape San Martin to Mexican boundary beach inspection, January 1967 through December 1969; aerial and ground photographs, hydrographic surveys, sand samples, wave gages, stream delta surveys, submarine canyons, offshore sand sources, shoreline conditions, evaluation of projects using federal and non-federal funds, computerized wave refraction diagrams, and beach profiles. Significant data are presented. Conclusions on shoreline conditions, and recommendations for future work are stated. Includes data. KEYWORDS: Coastal Processes beach profiles, coastal erosion problems, California, South Central Region, South Coast Region, San Diego Region Flood Plain Information, Ventura River, Ventura County, California AUTHOR(S): U. S. A. C. E., LAD SOURCE: For: Ventura County; U. S. Army Corps of Engineers, Los Angeles District, California DATE: 06/01/71 ABSTRACT: Flood information for the Ventura River. Includes peak flow data

and a hydrograph from the 1938 flood. Also gives a historical account. KEYWORDS: Hydrology & Hydraulics river discharge, watersheds, storms/floods California, South Central Region, Subregion VII, Santa Barbara Cell Shoreline Erosion at Tourmaline Surfing Park in the Vicinity of False Point, San Diego, California, Reconnaissance Report AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 27+ pp. DATE: 08/01/71 ABSTRACT: A reconnaissance study to determine need and justification for erosion control measures, and develop a preliminary plan and work program. Includes data. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal erosion problems, coastal structures, institutions/planning/mgmt., shore protection, wave climate California, San Diego Region, Subregion X, S. Oceanside Reach Detailed Project Report for Shore Protection at Point Loma Light Station, San Diego County, California AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: For: Eleventh Coast Guard District; U. S. Army Corps of Engineers, Los Angeles District, California, 198 pp. DATE: 01/01/72 Study gathered and analyzed information, prepared ABSTRACT: construction drawings and specifications, and estimated total cost of a project to construct a revetment approximately 800 feet long along the toe of the bluff. Includes some data. KEYWORDS: Coastal Processes coastal erosion problems, coastal structures, shore protection, wave climate California, San Diego Region, Subregion X, Silver Strand Cell Shore Protection Impr. Design Memo. for Stage 4B and 5 Constr., Beach Stabilization with Groins and Beach Fill at Newport Beach, Orange County, Calif. AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 75+ pp. DATE: 03/01/72 ABSTRACT: Recommendation to rehabilitate two steel sheet-pile groins, and artificially fill the downcoast side of each groin with sand. Revised 5/19/72 to include construction of three rubble-mound groins. KEYWORDS: Coastal Processes

beach nourishment/dredging, coastal structures, longshore transport, coastal erosion problems, shore protection, wave climate California, South Coast Region, Subregion IX, San Pedro Cell Environmental Statement, Surfside-Sunset and Newport Beach, Orange County, California AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 55 pp. DATE: 05/01/72 ABSTRACT: Investigation of the environmental aspects of the proposed project. KEYWORDS: Coastal Processes beach nourishment/dredging, beach profiles, environmental constraints, institutions/planning/mgmt. California, South Coast Region, Subregion IX, San Pedro Cell Flood Plain Information Escondido Creek, San Diego County, California AUTHOR(S): U. S. A. C. E., LAD For: San Diego County; U. S. Army Corps of Engineers, Los SOURCE: Angeles District, California, 34 pp. DATE: 05/01/72 ABSTRACT: Flood information summary for San Diego's Escondido Creek. Gives brief historical background. No data including, but estimates are made for discharges of past floods. KEYWORDS: Hydrology & Hydraulics storms/floods, watersheds, river discharge California, San Diego Region, Subregion X, Oceanside Cell Flood Plain Information, San Diego Creek and Peter Canyon Wash, Orange County, California AUTHOR(S): U. S. A. C. E., LAD SOURCE: For: Orange County; U. S. Army Corps of Engineers, Los Angeles, District, California, 28+ pp. DATE: 06/01/72 ABSTRACT: Flood information for two small creeks in Orange County; creeks are short, but watersheds are relatively large. Few data are available, but report has some discharge measurements. Gives a brief historical overview of this area. KEYWORDS: Hydrology & Hydraulics river discharge, watersheds, storms/floods California, South Coast Region, Subregion IX Shore Protection Improvement, DPR for Small Beach Erosion Control Project at Las Tunas Beach Park, Los Angeles County, California

AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 60+ pp. DATE: 03/01/73 ABSTRACT: Recommendation for a project comprising construction of rubble-mound groins, placement of beach sand, removal of deteriorated groins, and extension of existing storms drains. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, institutions/planning/mgmt., shore protection, wave climate, coastal erosion problems California, South Coast Region, Subregion VIII, Santa Monica Cell Flood Plain Information, Aliso Creek, Orange County, California AUTHOR(S): U. S. A. C. E., LAD SOURCE: For: Orange County Flood Control District; U. S. Army Corps of Engineers, Los Angeles District, California DATE: 03/01/73 ABSTRACT: Basic flood information for the gaged (since 1932) Aliso Creek in Orange County. Includes historical background of floods, some runoff data, and basic descriptions of watershed. KEYWORDS: Hydrology & Hydraulics river discharge, watersheds, storms/floods California, South Coast Region, Subregion IX, S. San Pedro Reach Flood Plain Information, Lower Santiago Creek, Orange County, California AUTHOR(S): U. S. A. C. E., LAD SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 57 pp. DATE: 06/01/73 Flood information for the Santiago Creek. Includes good ABSTRACT: historical overview back to 1825. Also gives data on peak discharges, including effects of flood control projects. KEYWORDS: Hydrology & Hydraulics river discharge, storms/floods, watersheds, reservoirs California, South Coast Region, Subregion IX, San Pedro Cell Offshore Ammunition Harbor and Bypass Channel at Naval Weapons Station, Seal Beach, California AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: Project Initiation Phase at Request of Western Divn. Naval Facilities Engineering Command, San Bruno, California; U. S. Army Corps of Engineers, Los Angeles District, Calif., 200+ pp. DATE: 07/01/73 ABSTRACT: An examination of the engineering aspects of the proposed offshore

harbor and bypass channel, considering water wave characteristics, hydrography, beach erosion, foundation and material conditions, salt water intrusion, and interference with coastal and back-bay recreational boat traffic. Also, preliminary examinations of the costs for the proposed offshore harbor, bypass channel, land acquistion, and the environmental aspects of the proposed plans. Available published and unpublished data, studies, and reports were used as a basis for these preliminary examinations. Supplemental studies were KEYWORDS: Coastal Processes coastal structures, environmental constraints, hydrographic surveys, institutions/planning/mgmt., shoreline use, wave climate California, South Coast Region, Subregion IX, San Pedro Cell Special Study of Santa Barbara Harbor Operation and Maintenance AUTHOR(S): U. S. A. C. E., LAD; Santa Barbara County U. S. Army Corps of Engineers, Los Angeles District, SOURCE: California, 20+ pp. DATE: 01/01/74 ABSTRACT: Cost analysis of present and alternative dredging methods. Includes design data. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, institutions/planning/mgmt. California, South Central Region, Subregion VII, Santa Barbara Cell Report on Engineering Aspects, Floods of January and February 1969, Southern California AUTHOR(S): U. S. A. C. E., LAD SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 85 pp. DATE: 01/01/74 ABSTRACT: This document describes damages to and performance of Corps of Engineers flood control projects in Southern California during the floods of January and February 1969. The document contains a special chapter devoted to sediment transport. KEYWORDS: Hydrology & Hydraulics river sediment discharge, storm damage, storms/floods California, South Central Region, South Coast Region, San Diego Region Navigation Improvement, GDM No. 1 for San Diego Harbor, San Diego County, California, Draft AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp.

DATE: 03/01/74 ABSTRACT: General design memorandum draft pursuant to recommendation of a plan of improvement for San Diego Harbor. Includes data in separate volume of appendices. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, environmental constraints, grain size, growth potential/recreation, institutions/planning/mgmt. California, San Diego Region, Subregion X, Silver Strand Cell Flood Plain Information, Vicinity of Montecito - Santa Barbara County, California AUTHOR(S): U. S. A. C. E., LAD SOURCE: For: Santa Barbara County Flood Control and Water Conservation District; U. S. Army Corps of Engineers, Los Angeles District, California, 40+ pp. DATE: 06/01/74 ABSTRACT: Basic flood information. Includes some histroical flood accounts (back to 1914), but data are sparse. A few peak flows for Montecito creeks, with an areal summary. KEYWORDS: Hydrology & Hydraulics river discharge, watersheds, storms/floods California, South Coast Region, Subregion VII, Santa Barbara Cell Beach Erosion Control, DPR for Small Beach Erosion Control Project, Las Tunas Beach Park, Los Angeles County, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 65+ pp. DATE: 07/01/74 ABSTRACT: Recommendation for a project to construct groins, place fill, remove old groins, and extend storm drains. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, institutions/planning/mgmt., wave climate, shore protection, coastal erosion problems California, South Coast Region, Subregion VIII, Santa Monica Cell Shoreline Erosion at Heisler Park, Laguna Beach, Orange County, California, Reconnaissance Report AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 33 pp. DATE: 09/01/74 ABSTRACT: Presentation of revetment plan to prevent further shoreline erosion. KEYWORDS: Coastal Processes coastal erosion problems, coastal structures, shore protection California, South Coast Region, Subregion IX, S. San Pedro Reach

Beach Erosion Control, DPR for Small Beach Erosion Project, Las Tunas Beach Park, Los Angeles County, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 100+ pp. DATE: 11/01/74 ABSTRACT: A recommended project comprising construction of two rubblemound groins; placement of artificial fill; removal of unsafe, deteriorated steel sheet-pile groins; and extension of existing storm drains in the proposed project area. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, institutions/planning/mgmt., shoreline changes, wave climate California, South Coast Region, Subregion VIII, Santa Monica Cell Final Environmental Statement, Las Tunas Beach Park, Los Angeles County, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 100+ pp. DATE: 11/01/74 ABSTRACT: The EIR Report for the proposed project will provide shore protection, eliminate certain hazards, and increase recreational area. Includes sand budget. KEYWORDS: Coastal Processes coastal structures, environmental constraints, longshore transport, shore protection, coastal erosion problems California, South Coast Region, Subregion VIII, Santa Monica Cell Oceanside Beach, California, Position Paper on Beach Erosion Control Study AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, Califronai, 20+ pp. DATE: 12/01/74 ABSTRACT: The expressed purpose of this paper is to establish the responsibility of federal government (cost sharing) in the provision of further beach erosion control improvements at Oceanside. Includes data and photos. KEYWORDS: Coastal Processes coastal erosion problems, institutions/planning/mgmt., shore protection California, San Diego Region, Subregion X, Oceanside Cell Reconnaissance Report, Breakwater Improvement at Redondo Beach King Harbor, Redondo Beach, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County

SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 01/01/75 ABSTRACT: Report to identify a need for improvement of the basins to accommodate commercial fishing, sport fishing boats, and recreational craft by modification of existing project. KEYWORDS: Coastal Processes coastal structures, growth potential/recreation, institutions/planning/mgmt., storm damage, wave climate California, South Coast Region, Subregion VIII, Santa Monica Cell Navigation Improvement, GDM No. 1 for San Diego Harbor, San Diego Harbor, California AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 02/01/75 ABSTRACT: General design memorandum pursuant to recommendation of a plan of improvement for San Diego Harbor. Includes data in separate volume of appendices. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, environmental constraints, grain size, growth potential/recreation, institutions/planning/mgmt. California, San Diego Region, Subregion X, Silver Strand Cell Reconnaissance Report - Shoreline Erosion at Hobson Beach Park, Ventura County, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 42 pp. DATE: 02/01/75 ABSTRACT: Investigation of a plan to construct 625 feet of rubble-mound revetment along the original limits of Hobson Beach Park shoreline, and an additional 100 feet shoreward upcoast to prevent flanking. Includes some data and photos. KEYWORDS: Coastal Processes beaches, coastal erosion problems, coastal structures, institutions/planning/mgmt., shore protection California, South Central Region, Subregion VII, Santa Barbara Cell Flood Plain Information Santa Barbara Stream Group AUTHOR(S): U. S. A. C. E., LAD SOURCE: For: Santa Barbara County Flood Control and Water Conservation District; U. S. Army Corps of Engineers, Los Angeles District, California, 39+ pp. DATE: 04/01/75

ABSTRACT: Contains the few hydrologic and flood data there are on historic floods in Santa Barbara City. Some flood flow (peaks) and estimates of flood flows. Includes plates and flood charts. KEYWORDS: Hydrology & Hydraulics river discharge, watersheds, storms/floods California, South Central Region, Subregion VII, Santa Barbara Cell Morro Bay Harbor, Position Paper on Harbor Study AUTHOR(S): U. S. A. C. E., LAD; San Luis Obispo County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 30+ pp. DATE: 05/01/75 This paper presents the various elements of a study that ABSTRACT: investigated the need for 1) extending the breakwaters to provide more protection for navigation, 2) expansion of the harbor to meet the boating demand, and 3) controlling the shoaling of the channels. Additional study looks at further development for additional commercial fishing and recreation craft, and a safer harbor entrance. Includes data on tides, waves, and sand transport. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt., longshore transport, tides. wave transformation California, South Central Region, Preliminary Engineering Analysis, Survey Report for Beach Erosion, Ventura County, California AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 83 pp. DATE: 05/01/75 ABSTRACT: This report presents the results of the preliminary engineering analysis of the beach erosion study of the Ventura County shoreline in the interest of beach erosion control and related purposes. Provides general summaries of physical and socio- economic information, describes beaches, and suggest alternative solutions. Includes 24 photos from December 1971 -July 1974 KEYWORDS: Coastal Processes beaches, coastal erosion problems, institutions/planning/mgmt., shore protection California, South Central Region, Subregion VII, Santa Barbara Cell, S. Santa Barbara Reach San Diego River, Mission Valley Design Memorandum No. 1 AUTHOR(S): U. S. A. C. E., LAD

SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California DATE: 07/01/75 ABSTRACT: Hydrologic and meteorologic data for the San Diego River. Includes precipitation, runoff data, and flood frequencies. KEYWORDS: Hydrology & Hydraulics precipitation, river discharge, storms/floods California, San Diego Region, Subregion X Navigation Study - Port San Luis, San Luis Obispo County, California AUTHOR(S): U. S. A. C. E., LAD; San Luis Obispo County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 27 pp. DATE: 11/01/75 Public information brochure for local evaluation of ABSTRACT: alternatives for damage reduction, recreational, commercial, and sports fishing needs. Questionnaire attached. KEYWORDS: Coastal Processes institutions/planning/mgmt. California, South Central Region, Subregion VI, Santa Maria River Cell Navigation Improvement, Draft GDM No. 2, Supplementary Design for Port San Luis, California AUTHOR(S): U. S. A. C. E., LAD; San Luis Obispo County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 150+ pp. DATE: 12/01/75 ABSTRACT: A plan for modification of GDM No. 1 is submitted. Data includes structures' design, socio-economics, waves, and geology. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, geology, growth potential/recreation, institutions/planning/mgmt., shoreline use, wave transformation California, South Central Region, Subregion VI, Santa Maria River Cell Navigation Improvement Supplement No. 1 to GDM No. 1 for Port San Luis, California (Main Report) AUTHOR(S): U. S. A. C. E., LAD; San Luis Obispo County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 125+ pp. DATE: 04/01/76 ABSTRACT: Modification to GDM No. 1, August 1969. Contains data on proposed structures' design, waves, geology, and socio- economics. KEYWORDS: Coastal Processes bench marks California, South Central Region, Subregion VI, Santa Maria River Cell Design Deficiency Report on Morro Bay Harbor, California AUTHOR(S): U. S. A. C. E., LAD; San Luis Obispo County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 34+

pp. DATE: 08/01/76 ABSTRACT: The report describes the necessity for extending the breakwaters to provide more protection for navigation and control shoaling of channels. Report presents plans and methods for necessary construction to provide a safer harbor for light-draft vessels. Includes data on sand transport. KEYWORDS: Coastal Processes coastal structures, longshore transport, sand entrapment, tides, wave climate, wave transformation California, South Central Region, Subregion VI, Morro Bay Cell Revised Plan of Study, Survey Report for North Coast of Los Angeles County, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County U. S. Army Corps of Engineers, Los Angeles District, SOURCE: California, 50 pp. DATE: 11/01/76 Study of the need for a harbor of refuge and a harbor for ABSTRACT: light-draft vessels. KEYWORDS: Coastal Processes aerial photography, coastal structures, growth potential/recreation, institutions/planning/mgmt., population California, South Coast Region, Subregion VIII, Santa Monica Cell Progress Report on Beach Erosion Control Study, San Diego County, California, in Vicinity of Oceanside AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 21+ pp. DATE: 01/01/77 ABSTRACT: Report to notify all interested parties of the status of the study. Includes data. KEYWORDS: Coastal Processes coastal erosion problems, institutions/planning/mgmt., shore protection California, San Diego Region, Subregion X, Oceanside Cell Revised Plan of Study, Survey Report for North Coast of Los Angeles County, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 50 pp. DATE: 03/01/77 ABSTRACT: The report investigates the need for a harbor of refuge somewhere on this stretch of coastline, and at least one harbor for light-draft vessels in

the near future. KEYWORDS: Coastal Processes aerial photography, beaches, coastal structures, institutions/planning/mgmt. California, South Coast Region, Subregion VIII, Santa Monica Cell Periodic Beach Nourishment at Surfside-Sunset Beach, Orange County, California, Draft AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: Shore Protection Improvement Design Analysis for Stage 7 Construction; U. S. Army Corps of Engineers, Los Angeles District, California, 20+ pp. DATE: 09/01/77 ABSTRACT: Presents the Stage 7 objectives which are to restore the recreational beach and protect public and private improvements by replenishing the existing feeder beach at Surfside-Sunset. KEYWORDS: Coastal Processes beach nourishment/dredging, growth potential/recreation, mining, geology California, South Coast Region, Subregion IX, San Pedro Cell Reconnaissance Report, Shoreline Erosion at Dockweiler - El Segundo Beaches, Los Angeles County, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 10+ pp. DATE: 02/01/78 ABSTRACT: The recommended plan is to construct rubble-mound revetment in the erosion problem area. KEYWORDS: Coastal Processes coastal structures, beach profiles, institutions/planning/mgmt., coastal erosion problems, shore protection California, South Coast Region, Subregion VIII, Santa Monica Cell Letter Report on Temporary Solution, Damages in Quivera Basin, San Diego River and Mission Bay, California AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 40+ pp. DATE: 04/01/78 ABSTRACT: Report of conditions in Quivera Basin and proposal of temporary solution to existing problems associated with short period waves in Mission Bay. KEYWORDS: Coastal Processes coastal structures, environmental constraints, institutions/planning/mgmt., wave transformation California, San Diego Region, Subregion X, Mission Bay Cell

Imperial Beach Erosion Control Project, San Diego County, California, Main Report, GDM No. 4 AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 46+ pp. DATE: 04/01/78 ABSTRACT: This report was prepared to investigate alternative means to restore and provide effective beach stabilization. KEYWORDS: Coastal Processes, Socioeconomics beach nourishment/dredging, coastal structures, institutions/planning/mgmt. California, San Diego Region, Subregion X, Silver Strand Cell Periodic Beach Nourishment at Surfside-Sunset Beach, Orange County, California AUTHOR(S): U. S. A. C. E., LAD; Orange County Shore Protection Improvement Design Analysis for Stage 7 SOURCE: Construction, U. S. Army Corps of Engineers, Los Angeles District, California, 40 pp. DATE: 06/01/78 The latest study results to provide improvements consisting ABSTRACT: of construction of a single detached offshore breakwater, and deposition of suitable beach material along the upper Orange County shoreline in the vicinity of Surfside-Sunset Beach. KEYWORDS: Coastal Processes beach nourishment/dredging, beach profiles, coastal erosion problems, shore protection California, South Coast Region, Subregion IX, San Pedro Cell Final Supplement to the Final Environmental Statement, Surfside- Sunset and Newport Beach, Orange County, California AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 75+ pp. DATE: 06/01/78 ABSTRACT: This environmental statement updates portions of and supplements the Final Environmental Statement, and addresses Stage 7 of the project which concerns a beach nourishment operation not specifically addressed in the final environmental statement. KEYWORDS: Coastal Processes beach nourishment/dredging, beach profiles, environmental constraints California, South Coast Region, Subregion IX, San Pedro Cell Coastal Collection Program for the California Coastline Conference, Los Angeles Meeting Transcript AUTHOR(S): U. S. A. C. E., LAD; Southern California

SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 82 pp. DATE: 07/12/78 ABSTRACT: Proceedings of a meeting at Los Angeles District Conference Room with presentations and comments from various agency and organization personnel on acquisition of data. KEYWORDS: Coastal Processes coastal erosion, institutions/planning/mgmt., shoreline changes, wave climate California, South Central Region, South Coast Region, San Diego Region Seal Beach - Anaheim Bay Harbor, California, Beach Erosion Control Study, Preliminary Draft AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 45+ pp. DATE: 09/01/78 ABSTRACT: An equity study report to review local cooperation and federal cost sharing. General information and some physical data. KEYWORDS: Coastal Processes beach profiles, hydrographic surveys, institutions/planning/mgmt., shore protection California, South Coast Region, Subregion IX, San Pedro Cell Imperial Beach Erosion Control Project, San Diego County, California, GDM No. 4 AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 49+ pp. DATE: 09/01/78 The initial purpose of the study was to investigate the ABSTRACT: efficiency and adequacy of the existing authorized project as a means for shore protection for the Imperial Beach shoreline. As the study progressed and public participation in relation to the study evolved, a need to reformulate and develop a plan more suitable for the solution to the beach erosion problem became evident. Includes data in separate volume of appendices. KEYWORDS: Coastal Processes, Socioeconomics beach profiles, coastal structures, growth potential/recreation, institutions/planning/mgmt., longshore transport, wave transformation California, San Diego Region, Subregion X, Silver Strand Cell Report on Floods of February and March 1978 in Southern California AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 100+ pp. DATE: 11/01/78

ABSTRACT: A summary of the local conditions created by the Southern California floods of February 5 through March 13, 1978 from winter storms. Includes data. KEYWORDS: Coastal Processes, Socioeconomics climatology, precipitation, storm damage, storms/floods California, South Central Region, South Coast Region, San Diego Region Ventura County, California, Survey Report for Beach Erosion Control -Main Report and Appendixes, Draft AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California; Main Report, 65 pp.; Appendices, 150+ pp. DATE: 12/01/78 ABSTRACT: Report presents the results of the beach erosion control study made of the shoreline of Ventura County. The study evaluated the various aspects of the beach erosion problems. Includes photos and data in appendices. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, growth potential/recreation, institutions/planning/mgmt., longshore transport, shore protection, wave climate California, South Central Region, Subregion VII, Santa Barbara Cell Seal Beach - Anaheim Bay Harbor, Orange County, California, Equity Study for Beach Erosion Control AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 90 pp. DATE: 02/01/79 Equity study to review the requirements of local cooperation ABSTRACT: for the project at Anaheim Bay. KEYWORDS: Coastal Processes beach nourishment/dredging, beach profiles, hydrographic surveys, institutions/planning/mgmt., shore protection California, South Coast Region, Subregion IX, San Pedro Cell Ventura County, California, Survey Report for Beach Erosion Control -Main Report and Appendixes AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California; Main Report, 60 pp.; Appendices, 150+ pp. DATE: 05/01/79 ABSTRACT: The report presents the results of the beach erosion control study of the shoreline of Ventura County. The study evaluates the various aspects of beach erosion problems along 41.2 miles of shoreline from Rincon Point to Sequit

Point near the Los Angeles County line. Includes data and photos in appendices. KEYWORDS: Coastal Processes beach profiles, growth potential/recreation, institutions/planning/mgmt., longshore transport, shore protection, wave climate California, South Central Region, Subregion VII, Santa Barbara Cell, S. Santa Barbara Reach San Diego County, Vicinity of Oceanside, California, Survey Report for Beach Erosion Control AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 70+ gg. DATE: 07/01/79 ABSTRACT: Evaluation of the effects of the discharge of dredged or fill material into the waters of San Diego County, vicinity of Oceanside. Includes data. KEYWORDS: Coastal Processes coastal erosion problems, beach profiles, environmental constraints, institutions/planning/mgmt., shore protection, wave climate California, San Diego Region, Subregion X, Oceanside Cell Channel Maintenance Santa Barbara Harbor, Santa Barbara, California AUTHOR(S): U. S. A. C. E., LAD; Santa Barbara County DACW 09-79-B-0025, U. S. Army Corps of Engineers, Los Angeles, SOURCE: District, California, 28 pp. DATE: 07/26/79 ABSTRACT: Request for technical proposals to establish and maintain an entrance channel to Santa Barbara Harbor for a period of three years. KEYWORDS: Coastal Processes beach nourishment/dredging California, South Central Region, Subregion VII, Santa Barbara Cell Monitoring Program for Stage 7 Construction, Periodic Beach Nourishment at Surfside-Sunset Beach, Orange County, California AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 15+ pp. DATE: 08/01/79 ABSTRACT: Recommendation of a 5-year monitoring program of periodic beach nourishment is outlined in this report. The monitoring program will enhance knowledge of coastal and biological processes between Anaheim Bay and Newport Bay, and will assist design parameters for future periodic nourishment construction. KEYWORDS: Coastal Processes beach nourishment/dredging, environmental constraints, institutions/planning/mgmt. California, South Coast Region, Subregion IX, San Pedro Cell

Seal Beach - Anaheim Bay Harbor, Orange County, California, Equity Study for Beach Erosion Control AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 59 pp. DATE: 03/01/80 ABSTRACT: Reviews the requirements of local cooperation, as well as the engineering aspects of Anaheim Bay Harbor (Seal Beach) and the San Gabriel River to Newport Bay (Surfside-Sunset and Newport Beach). KEYWORDS: Coastal Processes beach profiles, hydrographic surveys, institutions/planning/mgmt., coastal erosion problems, shore protection California, South Coast Region, Subregion IX, San Pedro Cell Ventura County, California, Survey Report for Beach Erosion Control -Main Report AUTHOR(S): U. S. A. C. E., LAD; Ventura County U. S. Army Corps of Engineers, Los Angeles District, SOURCE: California, 52 pp. DATE: 05/01/80 A summary of an analysis of economic, photographic and ABSTRACT: coastal data. A project was not found to be economically feasible for Federal government participation. KEYWORDS: Coastal Processes beaches, coastal erosion problems, institutions/planning/mgmt., shore protection California, South Central Region, Subregion VII, Santa Barbara Cell, S. Santa Barbara Reach Ventura County Survey Report for Beach Erosion Control - Appendices AUTHOR(S): U. S. A. C. E., LAD; Ventura County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 210 pp. DATE: 05/01/80 ABSTRACT: Six appendices including environmental, coastal, wave and longshore transport, climate data, and photos. KEYWORDS: Coastal Processes beaches, environmental constraints, hydrographic surveys, longshore transport, wave climate, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell, S. Santa Barbara Reach

Ventura County California, Survey Report for Beach Erosion Control

AUTHOR(S): U. S. A. C. E., LAD SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 63+ pp. DATE: 05/01/80 ABSTRACT: Includes beach profiles, hydrographic surveys of sediment transport from the Ventura and Santa Clara Rivers. Gives winter conditions and a discussion of storms and storm waves in 1977 through 1978 season. KEYWORDS: Hydrology & Hydraulics, Coastal Processes hydrographic surveys, longshore transport, river sediment discharge, storms/floods, storm waves, beach profiles California, South Central Region, Subregion VII, Santa Barbara Cell San Diego County, Vicinity of Oceanside, California, Survey Report for Beach Erosion Control, Draft AUTHOR(S): U. S. A. C. E., LAD; San Diego County U. S. Army Corps of Engineers, Los Angeles District, SOURCE: California, 129+ pp. DATE: 09/01/80 ABSTRACT: This study investigates 7.2 mile of shoreline along Oceanside to determine the extent of damage by erosion and develop a suitable plan for beach protection KEYWORDS: Coastal Processes, Socioeconomics beach profiles, coastal structures, institutions/planning/mgmt., coastal erosion problems, wave climate, shore protection California, San Diego Region, Subregion X, Oceanside Cell Santa Ana River, Phase 1 GDM on the Santa Ana River Main Stem (including Santiago Creek) AUTHOR(S): U. S. A. C. E., LAD U. S. Army Corps of Engineers, Los Angeles District, SOURCE: California, 4 Volumes DATE: 09/01/80 ABSTRACT: Gives overall characteristics of the Santa Ana River drainage area. Includes precipitation data, peak runoff data, and debris estimates. Gives a historical review. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, watershed sediment, storms/floods California, South Coast Region, Subregion IX, San Pedro Cell Project Maps AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: Reports Control Symbol ENGCW-0-15, U. S. Army Corps of Engineers, Los Angeles District, California, 100+ pp. DATE: 09/30/80

ABSTRACT: Maps of river and harbor and flood control projects, revised to September 30, 1980 except as indicated. Includes description of project. KEYWORDS: Coastal Processes maps, coastal structures, institutions/planning/mgmt. California, South Central Region, South Coast Region, San Diego Region Second Entrance, San Diego Harbor, California, Draft Report AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 55+ pp. DATE: 12/01/80 ABSTRACT: Review report for second entrance at San Diego Harbor. Includes data in appendices. KEYWORDS: Coastal Processes, Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., shoreline changes, coastal structures California, San Diego Region, Subregion X, Silver Strand Cell The Year of the Coast Brochures: Explore 9, 10, 11, 12, and 13 AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California DATE: 01/01/81 ABSTRACT: A series of brochures highlighting key natural and man-made features of the California Coast. KEYWORDS: Coastal Processes beaches, coastal erosion problems, coastal structures, coastal currents, wave climate California, South Central Region, South Coast Region, San Diego Region, Subregion VII, Subregion VIII, Subregion IX, Subregion X Shore Protection Improvement, Oceanside, California - Oceanside Beach Nourishment Letter Report AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 25 pp. DATE: 08/01/81 ABSTRACT: Review of Deutsch Real Estate Development, Inc. proposal for alternative sand removal at subject site, 24 August 1981. KEYWORDS: Coastal Processes beach nourishment/dredging, institutions/planning/mgmt., mining, coastal erosion problems, shore protection California, San Diego Region, Subregion X, Oceanside Cell Reconnaissance Report for Dike and Levee Rehabilitation, Morro Bay Harbor -Draft AUTHOR(S): U. S. A. C. E., LAD; San Luis Obispo County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 5+ pp.

DATE: 10/07/81 Design data in appendices. ABSTRACT: KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt. California, South Central Region, Subregion VI, Morro Bay Cell Oceanside Harbor, Oceanside, California AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 25 pp. DATE: 03/01/82 ABSTRACT: Report on a program for installing, monitoring, and evaluating the effectiveness of a sand bypass system as a means of maintenance of the harbor channels. Includes design plates. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, sand entrapment California, San Diego Region, Subregion X, Oceanside Cell Social Impact Assessment of Alternative Plans of the Sunset Harbor -Bolsa Chica Bay Study, Orange County, California AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 49 pp. DATE: 06/30/82 ABSTRACT: A working paper identifying and analyzing the alternative plans, and the social impacts of navigation and marsh restoration. KEYWORDS: Coastal Processes, Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., population, urbanization California, South Coast Region, Subregion IX, San Pedro Cell Progress Report on Navigation Study, Sunset Harbor and Bolsa Chica Bay, Orange County, California AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 107 pp. DATE: 01/01/83 ABSTRACT: The report describes the results of studies undertaken to determine feasibility of marina development and/or marsh and wetlands restoration at Bolsa Chica Bay on the Pacific Coast. Includes data. KEYWORDS: Coastal Processes coastal structures, environmental constraints, institutions/planning/mgmt., longshore transport, tides California, South Coast Region, Subregion IX, San Pedro Cell Imperial Beach Breakwater Monitoring Program, Final Proposal

AUTHOR(S): U. S. A. C. E., LAD; San Diego County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 18+ pp. DATE: 01/01/83 ABSTRACT: Project seeks to protect and stabilize sand accumulation at Imperial Beach. It will consist of construction of a submerged breakwater with adjoining groins. Program will document per- formance of the structure and its impact on the nearshore zone. Includes some data. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt., longshore transport, beach profiles, wave climate California, San Diego Region, Subregion X, Silver Strand Cell Transcript of Proceedings, U. S. Army Corps of Engineers Coastal Zone '83 Damage Workshop, San Diego, California AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: Peters Shorthand Reporting Corp., Sacramento, California; SRS Group, Ltd, New York, New York, 161 pp. DATE: 05/31/83 ABSTRACT: Discussion of the results of the winter storms of November 1982 through March 1983. Several speakers and panel members from various agencies addressed pertinent subjects. KEYWORDS: Coastal Processes, Socioeconomics coastal erosion, storm damage, storms/floods, storm surge, storm waves California, South Central Region, South Coast Region, San Diego Region Coastal Storm Damage, Winter 1983 AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: A Task Force Report prepared by U. S. Army Corps of Engineers, Los Angeles District, California and State of California, Sacramento, California, 51+ pp. DATE: 04/01/84 ABSTRACT: Describes storms affecting the coast of California during the winter season of 1982-1983, and the resulting damage. Includes damage detail and estimated costs. Summarizes in one document the available damage data from the storms, including causes. Report is limited to the damage directly attributable to waves and tides along the shore. KEYWORDS: Coastal Processes, Socioeconomics beach profiles, storm damage, storms/floods, storm surge, storm waves, tides California, South Central Region, South Coast Region, San Diego Region

Seal Beach - Anaheim Bay Harbor, Orange County, California, Beach Erosion Control Study for Beach Erosion Control, Draft AUTHOR(S): U. S. A. C. E., LAD; Orange County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 60+ pp. DATE: 08/01/84 ABSTRACT: Reviews the requirements of local cooperation as well as engineering aspects of the project. Reevaluation of coastal processes and physical impact of navigation structures on Seal Beach was beyond study scope. Includes data. KEYWORDS: Coastal Processes beach profiles, hydrographic surveys, coastal erosion problems, institutions/planning/mgmt., shore protection California, South Coast Region, Subregion IX, San Pedro Cell Evaluation Report, Breakwater Improvement at Redondo Beach King Harbor, California AUTHOR(S): U. S. A. C. E., LAD; Los Angeles County SOURCE: U. S. Army Corps of Engineers, Los Angeles District, California, 60+ pp. DATE: 09/01/84 ABSTRACT: Evaluation of the man-made harbor breakwaters, and storm waves damage. Alternative plans are suggested. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt., storm damage, wave climate, wave transformation California, South Coast Region, Subregion VIII, Santa Monica Cell Geomorphology Framework Report, Dana Point to the Mexican Border AUTHOR(S): U. S. A. C. E., LAD; Southern California Ref. CCSTWS 84-4; U. S. Army Corps of Engineers, Los Angeles SOURCE: District, California, 75+ pp. DATE: 09/01/84 Basic data on the geomorphology, the physical ABSTRACT: characteristics, and processes of sediment transport along the coast of California (Dana Point to the Mexican Border). Includes maps. KEYWORDS: Coastal Processes, Geomorphology geomorphic processes, littoral sediment, longshore transport, mining, neotectonics, geology California, Mission Bay Cell, San Diego Region, Silver Strand Cell, Subregion X, Oceanside Cell Geomorphology Framework Report Dana Point to the Mexican Border AUTHOR(S): U. S. A. C. E., LAD SOURCE: Coast of California Storm and Tidal Wave Study, CCSTWS 84-4, U.

s.

Army Corps of Engineers, Los Angeles District, California, 200 pp. DATE: 09/01/84 ABSTRACT: Includes information on the sediments, geology, and geologic processes. Data was extracted from previous reports. KEYWORDS: Geomorphology, Coastal Processes geology, maps, littoral sediment, petrology, watershed sediment, grain size California, San Diego Region, Subregion X List of Local Coastal Plans (LCP) for Communities in Southern California AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: Memorandum-for-the-Record, Coastal Resources Branch, South Coast Section; U. S. Army Corps of Engineers, Los Angeles District, California, 11 pp. DATE: 06/01/85 ABSTRACT: List of local coastal plans (LCP) for all relevant communities in the Corps of Engineers Los Angeles District, compiled May 1985. Communities are located in San Diego, Orange, Los Angeles, Ventura, Santa Barbara and San Luis Obispo Counties. KEYWORDS: Coastal Processes, Socioeconomics growth potential/recreation, institutions/planning/mgmt., beaches, property value/land use, shoreline use, population California, South Central Region, Southern California Coastal Photography and Beach Profile Index AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: Coast of California Storm and Tidal Waves Study, Ref. No. CCSTWS 85-5, U. S. Army Corps of Engineers, Los Angeles District, 75+ pp. DATE: 09/01/85 Index to all Los Angeles District coastal photography, beach ABSTRACT: profile data, and historic bathymetric survey charts. The photography dates back to 1920 and includes both ground and aerial photos. The beach profile and nearshore bathymetric survey data date back to 1937. KEYWORDS: Coastal Processes, Survey aerial photography, beach profiles, hydrographic surveys, maps, remote sensing California, South Central Region, South Coast Region, San Diego Region Southern California Shoreline Socio-Economic Data Summary AUTHOR(S): U. S. A. C. E., LAD; Southern California SOURCE: Coast of California Storm and Tidal Waves Study, Ref. No. CCSTWS 85-9, U. S. Army Corps of Engineers, Los Angeles District, California, 50+ pp. DATE: 10/01/85 ABSTRACT: Summarizes socio-economic data for the coastal strip of San Diego, Orange, Los Angeles, Ventura, Santa Barbara and San Luis Obispo Counties. Includes land use, approximate market value of land, population, list of beaches, and discussions of regional perception of coastal erosion.

KEYWORDS: Coastal Processes, Socioeconomics coastal erosion problems, growth potential/recreation, population, property value/land use, shoreline use, storm damage California, South Central Region, South Coast Region, San Diego Region National Shoreline Study, California Regional Inventory AUTHOR(S): U. S. A. C. E., SPD U. S. Army Corps of Engineers, South Pacific Division, San SOURCE: Francisco, California; and Dames & Moore, San Francisco, California, 200+ pp. DATE: 08/01/71 ABSTRACT: An inventory of coastal shoreline characteristics of the State of California including major bays and estuaries. Coastal characteristics studies are related primarily to erosion produced by waves and other coastal phenomena. Includes maps and data. KEYWORDS: Coastal Processes coastal erosion, longshore transport, maps, nearshore currents, shoreline use, wave climate California, South Central Region, South Coast Region, San Diego Region Report on The National Shoreline Study AUTHOR(S): U. S. A. C. E., Washington, D. C. SOURCE: U. S. Army Corps of Engineers, Washington, D. C., 59 pp. DATE: 08/01/71 ABSTRACT: This report (one of 12) addresses the study of the Nation's shorelines, and the investigation and development of suitable means for protecting, restoring, and managing shorelines to minimize erosioninduced damage. Some regional data. KEYWORDS: Coastal Processes beaches, coastal erosion, coastal structures, institutions/planning/mgmt., shore protection California Wave and Surge Action, Anaheim Bay, California AUTHOR(S): U. S. A. C. E., WES WES Tech. Memo. 2-255, U. S. Army Corps of Engineers, SOURCE: Mississippi River Commission, Waterways Experiment Station, Vicksburg, Mississippi, 100+ pp. DATE: 05/01/48 ABSTRACT: Study of Anaheim Bay in 1946 looked at problems associated with proposed eastward extension of the detached breakwater in the San Pedro Bay. Primary concern was the most suitable location and alignment of this extension from the standpoint of wave and surge conditions, beach erosion, and sewage pollution along the littoral from Los Angeles River to Sunset Beach. Results of

study indicated no overall protection afforded from wave and surge action in Anaheim Bay area; problem of beach erosion down-coast from Anaheim Bay could not be solved by breakwater extensions tested; and no appreciable improvements of harbor conditions at Naval Ammunition and Net Depot as a result of KEYWORDS: Coastal Processes beach profiles, coastal structures, longshore transport, nearshore currents, wave climate, wave transformation California, South Coast Region, Subregion IX, San Pedro Cell Designs for Rubble-Mound Breakwater Repair, Morro Bay Harbor, California AUTHOR(S): U. S. A. C. E., WES WES Tech. Report No. 2-567, U. S. Army Corps of Engineers, SOURCE: Waterways Experiment Station, Vicksburg, Mississippi, 50 pp. DATE: 05/01/61 ABSTRACT: A hydraulic model investigation was conducted during February- April 1960 to obtain data from which competitive designs could be developed for the repair of the damaged breakwater at Morro Bay. Includes design data. KEYWORDS: Coastal Processes coastal structures, wave climate, wave transformation California, South Central Region, Subregion VI, Morro Bay Cell San Diego Bay Model Study, Summary Report AUTHOR(S): U. S. A. C. E., WES SOURCE: Hydraulic Model Study for Los Angeles District, California; U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi, 120 pp. DATE: 06/01/71 ABSTRACT: Study was performed February 1967 - October 1968. Model was carefully adjusted to accurately reproduce observed prototype tides, tidal current directions and velocities, and dispersion of dye tracers. The purpose of the model study was to determine the effects of a proposed second entrance on the hydraulic and flushing characteristics of the bay. Includes dye concentration data. KEYWORDS: Coastal Processes environmental constraints, nearshore currents, tidal inlets, tides California, San Diego Region, Subregion X, Preliminary Numerical Tidal Results For the Bolsa Chica Study AUTHOR(S): U. S. A. C. E., WES SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi, 100+ pp. DATE: 02/27/81 ABSTRACT: A draft memorandum for record describing the preliminary results of

Bolsa Chica, Orange County, tidal circulation study. Includes 80 plots of tidal characteristics. KEYWORDS: Coastal Processes environmental constraints, nearshore currents, tidal inlets, tides California, South Coast Region, Subregion IX, San Pedro Cell Appendix 1, Coast of California, Carpinteria to Point Mugu, Beach Erosion Control Study AUTHOR(S): U. S. Army, Secretary of the Army SOURCE: House Document No. 29, 83d Congress, 1st Session, 92 pp. DATE: 06/06/52 ABSTRACT: Letter from the Sceretary of the Army transmitting/submitting report on a cooperative beach erosion control study, Santa Barbara and Ventura Counties. Includes data. KEYWORDS: Coastal Processes beach profiles, coastal erosion, littoral sediment, longshore transport, wave climate, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell Watersheds of San Diego County Draining into the Pacific Ocean, California AUTHOR(S): U. S. Department of Agriculture Preliminary Examination Report, U. S. Department of SOURCE: Agriculture, Bureau of Agricultural Economics, 58 pp. DATE: 05/01/42 Survey report of San Diego coastal watersheds. Includes ABSTRACT: hydrology data (discharge), precipitation, sedimentation estimates, and flood history (to 1942) KEYWORDS: Hydrology & Hydraulics precipitation, river discharge, storms/floods, watershed sediment California, San Diego Region, Mission Bay Cell, Silver Strand Cell Watersheds of San Diego County Draining into the Pacific Ocean, California AUTHOR(S): U. S. Department of Agriculture SOURCE: U. S. Department of Agriculture, Preliminary Examination Report, Bureau of Agricultural Economics, 58 pp. DATE: 05/01/42 ABSTRACT: Survey report of San Diego coastal watersheds. Includes data. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, storms/floods, watershed sediment California, San Diego Region, Subregion X, Oceanside Cell, Mission Bay Cell, Silver Strand Cell

Survey Report-Runoff and Waterflow Retardation and Soil Erosion Prevention for

Flood Control Purposes, Santa Ynez River, California AUTHOR(S): U. S. Department of Agriculture SOURCE: U. S. Department of Agriculture, Forest Service, Unpublished Report, Berkeley, California, 29+ pp. DATE: 11/25/42 ABSTRACT: Survey report of the Santa Ynez River. Main report gives general information summary. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology fires, precipitation, river discharge, watershed sediment, storms/floods California, South Central Region, Subregion VI, Santa Ynez River Cell, Santa Barbara Cell, Subregion VII Survey Report - Runoff and Waterflow Retardation and Soil Erosion Prevention for Flood Control Purposes, Santa Maria River, California AUTHOR(S): U. S. Department of Agriculture SOURCE: U. S. Department of Agriculture, Forest Service, Unpublished Report, Berkeley, California, 34+ pp. DATE: 12/11/42 Survey report on Santa Maria River and a general hydrologica ABSTRACT: survey. Includes flood history (1812-1940), precipitation data flood hydrographs, and erosion and sedimentation. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, watershed sediment, storms/floods California, South Central Region, Subregion VI, Santa Maria River Cell Report of Survey, Santa Maria River Watershed, California AUTHOR(S): U. S. Department of Agriculture SOURCE: U. S. Department of Agriculture, Unpublished Report, 24+ pp. DATE: 06/01/50 Gives details of Santa Maria River watershed. Includes ABSTRACT: historical flood accounts from 1825-1950. Precipitation and flood runoff data. Sedimentation estimates especially good for this region because of sparse data. A small section on fire effects is included. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics fires, precipitation, river discharge, river sediment discharge California, South Central Region, Subregion VI, Santa Maria River Cell Fire-Flood Sequences on the San Dimas Experimental Station AUTHOR(S): U. S. Department of Agriculture SOURCE: Tech. Paper No. 6, California Forest and Range Experiment Station, Department of Agriculture, U. S. Forest Service, California, 28 pp. DATE: 03/01/54 ABSTRACT: Details of fire, post-fire erosion and rainfall on the San Dimas Experimental forest in Southern California. Gives pre and post-fire erosion rates, and compares with 1938 fire and 1919 fire. Includes data.

KEYWORDS: Hydrology & Hydraulics fires, watershed sediment California, South Coast Region, Subregion IX, San Pedro Cell Report of Survey, Santa Maria River Watershed, California AUTHOR(S): U. S. Department of Agriculuture SOURCE: U. S. Department of Agriculture, Unpublished Report (mimeographed), 24+ pp. DATE: 06/01/50 ABSTRACT: Gives details of Santa Maria River watershed. Includes historical flood accounts from 1825 to 1950, precipitation and flood runoff data, sedimentation estimates, and a small section on fire effects. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, river sediment discharge, fires, storms/floods California, South Central Region, Subregion VI, Santa Maria River Cell Maximum Station Precipitation for 1, 2, 3, 6, 12, and 24 Hours, Part XXIII, California AUTHOR(S): U. S. Department of Commerce, Weather Bureau Tech. Paper No. 15, U. S. Department of Commerce, Weather SOURCE: Bureau, Part XXIII, 341 pp. DATE: 01/01/59 ABSTRACT: Maximum precipitation data tables for California, Incudes maps and tables with maximum recorded values and dates. KEYWORDS: Oceanography & Meteorology precipitation California United States Coast Pilot 7, Pacific Coast, California, Oregon, Washington, and Hawaii AUTHOR(S): U. S. Dept of Commerce, NOS SOURCE: Twentieth Edition, U. S. Dept. of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service, 439+ pp. DATE: 06/01/84 ABSTRACT: Supplements navigational information shown on nautical charts, and is based on field inspection. Includes navigation regula- tions, outstanding landmarks, channel and anchorage peculiarities, dangers, weather, ice, routes, pilotage, and port facilities. Published annually. KEYWORDS: Coastal Processes climatology, coastal structures California

A Climatology and Oceanographic Analysis of the California Pacific Outer Continental Shelf Region AUTHOR(S): U. S. Dept. of Commerce, Center for Env. Studies SOURCE: Final Report to BLM, U. S. Dept. of Interior; Center for Envir-

onmental Studies, U. S. Dept. of Commerce, NOAA, Environmental Data and Information Service, Washington, D. C., 500+ pp. DATE: 09/01/80 ABSTRACT: This report describes the results of an environmental study of the California Pacific Offshore Continental Shelf (CPOS) region. Study objectives were to 1) provide data summaries of historical, physical, oceanographic, and meteorological data for the California region, 2) synthesize and interpret the summarized data, identifying the most significant features, 3) determine inadequacies in the data archive, and 4) offer recommendations for future work. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, coastal currents, nearshore currents, California, South Central Region, South Coast Region, San Diego Region A Climatology and Oceanographic Analysis of the California Pacific Outer Continental Shelf Region AUTHOR(S): U. S. Dept. of Commerce, Center for Env. Studies SOURCE: Center for Environmental Studies, U. S. Dept. of Commerce, NOAA, Environmental Data and Information Service, Washington, D. C., 250+ pp. DATE: 09/01/81 ABSTRACT: Edited version of final report dated 9/80. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, coastal currents, nearshore currents, storms/floods, tides, wave climate California, South Central Region, South Coast Region, San Diego Region Annotated Tsunami Bibliography, 1962-1976 AUTHOR(S): U. S. Dept. of Commerce, Int'l Tsunami Info. Ctr. SOURCE: International Tsunami Information Center, U. S. Dept. of Commerce, NOAA, NUREG/CR-2840, Washington, D. C., 298 pp. DATE: 08/01/82 ABSTRACT: Annotated bibliography. KEYWORDS: Coastal Processes tsunamis California, Oregon, Mexico Tide Tables 1985, High and Low Water Predictions, West Coast of North and South America including the Hawaiian Islands AUTHOR(S): U. S. Dept. of Commerce, NOS SOURCE: U. S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service, Rockville, Maryland, 232 pp. DATE: 01/01/84 ABSTRACT: Tide times and height predictions for 1985. Includes astronomical and other data. Published tide data is available from 1853, and tidal current data is available from 1890. KEYWORDS: Coastal Processes tides

California

Santa Maria - Sisquoc Area, Central California Coastal Project, Special Report AUTHOR(S): U. S. Dept. of Interior, BLM SOURCE: Revised February 1975, U. S. Dept. of Interior, Bureau of Land Management, Mid-Pacific Region, Sacramento, California, 159 pp. DATE: 06/01/74 ABSTRACT: Consideration of plans to provide additional water supply to meet increasing needs. Includes construction of dams and reservoirs. KEYWORDS: Coastal Processes, Geomorphology environmental constraints, river discharge, reservoirs California, South Central Region, Subregion VI Surface Management Index AUTHOR(S): U. S. Dept. of Interior, BLM SOURCE: U. S. Dept. of Interior, Bureau of Land Management, Sacramento, California, 2 pp. DATE: 01/01/82 ABSTRACT: A pamphlet describing the available Surface Management and the available Surface Minerals Management Maps of California with index. KEYWORDS: Geomorphology, Socioeconomics maps, population, watershed sediment California, South Central Region, South Coast Region, San Diego Region Surface Management Maps AUTHOR(S): U. S. Dept. of Interior, BLM SOURCE: U. S. Dept. of Interior, Bureau of Land Management, Sacramento, California, 12 maps DATE: 01/01/84 ABSTRACT: Twelve surface management maps, scale 1:100,000, designate public, federal, and state lands from Cape San Martin to the Mexican Border. KEYWORDS: Geomorphology, Socioeconomics maps California Santa Margarita Project, San Diego County, California, Planning Report AUTHOR(S): U. S. Dept. of Interior, BLM Draft Supplemental Environmental Statement, U. S. Dept. of SOURCE: Interior, Bureau of Land Management, Lower Colorado Region, Boulder City, Nevada, 225+ pp. DATE: 04/01/84 The proposed project would include dam and reservoir ABSTRACT: construc- tion which would provide water supply, flood control and recre- ational opportunities, but would inundate riparian vegetation of high wildlife value. This report summarizes studies and results to date. Includes data on beach sand replenishment and socio- economics. KEYWORDS: Coastal Processes, Socioeconomics, Hydrology & Hydraulics beach nourishment/dredging, environmental constraints, estuarine sediment storage,

California, San Diego Region, Subregion X, Oceanside Cell Channel Islands, California; Island Study AUTHOR(S): U. S. Dept. of Interior, Bureau of Outdoor Rec. SOURCE: U. S. Dept. of Interior, Bureau of Outdoor Recreation, Southwest Regional Study, 158 pp. DATE: 02/01/68 ABSTRACT: Summarizes past studies, particularly by the National Park Service, to portray the scientific, historical, and recreation potential of five Channel Islands: Santa Barbara, Anacapa, San Miguel, Santa Cruz, Santa Rosa. The report proposes that these islands be established as a national park. KEYWORDS: Coastal Processes, Socioeconomics growth potential/recreation, institutions/planning/mgmt. California, South Central Region Santa Margarita River Estuary Resource Values and Management Recommendations, San Diego County, California AUTHOR(S): U. S. Dept. of Interior, FWS, Divn. Ecol. Serv. For: U. S. Marine Corps, Natl. Resources Office, Camp SOURCE: Pendleton, California; U. S. Dept. of Interior, Fish and Wildlife Service, Divn. of Ecological Services, Sacramento, California, 141 pp. DATE: 07/01/81 ABSTRACT: Study of resources and recommendations for management plan. KEYWORDS: Coastal Processes, Socioeconomics environmental constraints, estuarine sediment storage, growth potential/recreation, institutions/planning/mgmt., tidal inlets California, San Diego Region, Subregion X, Oceanside Cell Land Use and Land Cover, 1972-1975, Santa Ana, California AUTHOR(S): U. S. Dept. of Interior, GS Open File Map 76-114-1, U. S. Dept. of Interior, Geological SOURCE: Survey, Reston, Virginia DATE: 01/01/76 ABSTRACT: Map shows nine different catagories of land use in the Santa Ana area. Scale 1:250,000. Map is used as an overlay to existing cartographic maps. KEYWORDS: Geomorphology, Socioeconomics watershed sediment, maps, population, urbanization California, South Coast Region, Subregion IX, San Pedro Cell, S. San Pedro Reach Land Use and Land Use Cover Maps AUTHOR(S): U. S. Dept. of Interior, GS SOURCE: U. S. Department of Interior, Geological Survey, Reston, Virginia DATE: 01/01/77 ABSTRACT: Maps show a classification of the state according to land cover or

land use. Map scale 1:250,000 and 1:100,000. Some maps are available in digital form. KEYWORDS: Geomorphology maps California Land Use and Land Cover and Associated Maps AUTHOR(S): U. S. Dept. of Interior, GS SOURCE: General Interest Publication, U. S. Dept. of Interior, Geological Survey, Reston, Virginia, 6 pp. DATE: 01/01/78 ABSTRACT: A pamphlet describing the maps, their availability and ordering information. Maps include: land use, land cover, political units, hydrologic units, federal ownership, etc. KEYWORDS: Geomorphology, Socioeconomics maps, population, watershed sediment, urbanization California, South Central Region, South Coast Region, San Diego Region Land Use and Land Cover, 1972-1975, San Diego, California AUTHOR(S): U. S. Dept. of Interior, GS Map L-125, U. S. Dept. of Interior, Geological Survey, Reston, SOURCE: Virginia DATE: 01/01/80 ABSTRACT: A 1:250,000 scale map of the San Diego area as a base for land use and land cover information classified into 37 specific categories. KEYWORDS: Geomorphology, Socioeconomics watershed sediment, maps, population, urbanization California, San Diego Region, Subregion X, Oceanside Cell Index to Land Use and Land Cover Information AUTHOR(S): U. S. Dept. of Interior, GS U. S. Dept. of Interior, Geological Survey, Reston, Virginia, SOURCE: one map sheet DATE: 10/01/83 ABSTRACT: Map with index of available quadrangles of land use and land cover and associated maps on one side, and land use and land cover and associated map digital data on overleaf. Maps are at a scale of 1:100,000 and 1:250,000. Maps show land use and land cover, political and hydrologic units, census at county level, federal and state ownership. Index consists of one map. KEYWORDS: Geomorphology, Socioeconomics maps, neotectonics, watershed sediment, urbanization California, South Central Region, South Coast Region, San Diego Region Digital Line Graph (DLG) and Digital Evaluation Data (DEM) AUTHOR(S): U. S. Dept. of Interior, GS SOURCE: U. S. Dept. of Interior, Geological Survey, Reston, Virginia DATE: 01/01/84

ABSTRACT: Digitized map data (line graph data: range, township, highways, etc., and elevations) from USGS 1:24,000 scale maps. Data is available on 9-track computer tape. KEYWORDS: Geomorphology, Socioeconomics maps California Physical Oceanography and Meteorology of the California Outer Continental Shelf AUTHOR(S): U. S. Dept. of Interior, MMS SOURCE: U. S. Dept. of Interior, Minerals Management and Service, POCS Region, Technical Paper No. 82-2, BLM-YN-P/T-82-002-1792, Los Angeles, California, 308 pp. DATE: 08/01/82 ABSTRACT: Describes the California current system and related physical oceanography. Distribution of salinity and temperature is used to define water masses. Surface layer mixing, important in pollution transport, is inferred from Brunt-Vaisala frequency and from surface mixed layer thickness. Water elevation (waves and tides) and the relative risk associated for the California coast are discussed. Nearshore circulation is presented. Seasonal and, when possible, monthly variations of the properties are discussed. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents, tides, wave climate, wave transformation California, South Central Region, South Coast Region, San Diego Region Climatology of California Coastal Waters AUTHOR(S): U. S. Navy, Fleet Weather Control U. S. Navy, Fleet Weather Control, U. S. Naval Air Station, SOURCE: Alameda, California, 109 pp. DATE: 01/01/69 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology California Summary of Synoptic Meteorological Observations (SSMO) AUTHOR(S): U. S. Navy, Naval Oceanographic Command SOURCE: U. S. Navy, Naval Oceanography Command Detachment, Asheville, North Carolina, 405 pp. DATE: 02/01/81 ABSTRACT: A list of published SSMO's is contained in the catalog part of the "Guide to Standard Weather Summaries and Climatic Services", NAVAIR 50-1C - 534. The data summarized in the tables were obtained from Tape Data Family II

(TDF-II) Marine Surface Observations. The source of these marine surface observations was weather observation taken aboard vessels. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, wave climate California Climatic Study of the Southern California Operating Area Near Coastal Zone AUTHOR(S): U. S. Navy, Naval Oceanographic Command SOURCE: U. S. Navy, Naval Oceanography Command Detachment, Asheville, North Carolina, 207 pp. DATE: 10/01/83 ABSTRACT: This climate study consists of monthly charts and tables of (1)clouds, (2) visibility-tables, (3) ceiling-visibility (mid range), (4) wind-visibility-cloudiness, (5) scalar mean wind speed, (6) wind speed, (7) air and sea temperature, (8) surface wind roses and 9) station climatic summaries. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, precipitation, storms/floods, wind California, South Central Region, South Coast Region, San Diego Region Oceanographic Data Report - San Clemente Island Area - July and August, 1967 AUTHOR(S): U. S. Navy, Naval Oceanographic Office SOURCE: Informal Report IR No. 68-20, U. S. Navy, Naval Oceanographic Office, Washington, D. C., 43+ pp. DATE: 03/01/68 ABSTRACT: This report presents oceanographic data collected during July and August 1967 in the San Clemente Island Deep Submergence Rescue Vehicles Test Range and Sea Lab III areas. Profiler records show two small valleys in the Sea Lab III area. The bottom surface was predominantly sand at the sites sampled. Although current speeds of 0.5 knots were recorded at 100 and 260 fathoms, the predominant current speeds varied from 0.0 to 0.2 knots. The near-bottom current at the 42 fathom site reached 0.7 knots with a mean speed of 0.5knots. The current direction at the sites sampled reverses along an axis parallel to San Clemente Island. Bottom photographs show KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, sedimentation California, San Diego Region, Subregion X Atlas of Surface Currents: Northeastern Pacific Ocean AUTHOR(S): U. S. Navy, Naval Oceanographic Office SOURCE: Publication 570, U. S. Navy, Naval Oceanographic Office, Washington, D. C. DATE: 01/01/74

ABSTRACT: not reviewed KEYWORDS: Coastal Processes coastal currents California Continental Margin From San Francisco, California To Cedros Island, Baja California AUTHOR(S): Uchupi, E. SOURCE: Ph.D. Dissertation, University of Southern California, Los Angeles, California, 197 pp. DATE: 01/01/62 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes California, South Central Region, South Coast Region, San Diego Region Former Marine Shorelines of the Gaviota Quadrangle, Santa Barbara County, California AUTHOR(S): Upson, J. E. SOURCE: Journal of Geology, Vol. 59, pp. 415-446 DATE: 01/01/51 The report describes former marine shorelines in the Gaviota ABSTRACT: quadrangle. KEYWORDS: Geomorphology, Coastal Processes geology, geomorphic processes, maps, neotectonics California, South Central Region, Subregion VII, Santa Barbara Cell Tsunamis AUTHOR(S): Van Dorn, W. G. Scripps Institution of Oceanography, La Jolla, California, In: SOURCE: Advances in Hydroscience, Vol. III, Academic Press, New York, 105 pp. DATE: 01/26/65 ABSTRACT: The term "tsunami" or "tidal wave" designates the gravity wave system formed in the sea following any large scale, short-duration disturbance of the free surface. While past tsunamis have caused great damage and loss of life along oceanic shorelines, their relative infrequency and complex local behavior has resulted in widespread misconceptions as to their true nature even among scientists. KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis, wave climate California Black's Beach Landslide AUTHOR(S): Vanderhurst, W. L.; McCarthy, R. J.; Hannan, D. L. SOURCE: In : Geologic Studies in San Diego, P. L. Abbott, Ed., San Diego Association of Geologists Field Trips, April 1982, SAG, San Diego, California, 11 pp. DATE: 01/01/82

ABSTRACT: Describes the deep-seated, large-scale landslide that occurred in the coastal bluff above Black's Beach, La Jolla, California. KEYWORDS: Geomorphology, Coastal Processes geology, geomorphic processes, cliff sediment, coastal erosion, shoreline changes California, San Diego Region, Subregion X, Oceanside Cell Rate of Sea Cliff Recession on Property of Scripps Institution of Oceanography, California AUTHOR(S): Vaughan, T. W. SOURCE: Science, Vol. 75, p. 250 DATE: 01/01/32 ABSTRACT: not reviewed KEYWORDS: Coastal Processes cliff sediment, coastal erosion California, San Diego Region, Subregion X, Oceanside Cell Geologic Map of the San Joaquin Hills-San Juan Capistrano Area, Orange County, California Vedder, J. G.; Yerkes, R. F.; Schoellhamer, J. E. AUTHOR(S): Oil and Gas Map, OM-193, U. S. Dept. of Interior, Geological SOURCE: Survey, Reston, Virginia DATE: 01/01/57 ABSTRACT: Geologic map scale 1:24,000. KEYWORDS: Geomorphology geology, maps, mining, watershed sediment California, South Coast Region, Subregion VII, Subregion IX, S. San Pedro Reach Preliminary Reports on the Geology of the Continental Borderland of Southern California AUTHOR(S): Vedder, J. G.; Beyer, L. A.; Junger, A.; Moore, G. W. Map MF-624, U. S. Dept. of Interior, Geological Survey, Reston, SOURCE: Virginia, 34 pp. DATE: 01/01/74 These maps describe the structure and lithology of the ABSTRACT: geology of the continental borderland from the shoreline to the Patton Escarpment. Map scale 1:250,000. KEYWORDS: Geomorphology geology, geomorphic processes, maps, neotectonics, sedimentation California, South Central Region, South Coast Region, San Diego Region Ventura County Flood Control District, Zone Three, Flood Control and Water Conservation AUTHOR(S): Ventura County SOURCE: For: Ventura County; D. R. Warren Co. Engineers, Ventura, California, Unpublished, 136 pp. DATE: 01/01/45

ABSTRACT: Hydraulic investigation of flood control project for Calleguas Creek area, Ventura. Includes runoff data, streamflow, storm hydrograph, rainfall data and areal description. KEYWORDS: Hydrology & Hydraulics river discharge, storms/floods California, South Central Region, Subregion VII, Santa Barbara Cell The Great Floods of 1969 AUTHOR(S): Ventura County Flood Control District SOURCE: Ventura County Flood Control District, Ventura, California DATE: 09/01/69 ABSTRACT: Report on 1969 floods in Ventura. Includes hydrologic and meteorological summaries, and data. Data includes storm hydrographs for San Antonio Creek and Santa Clara Creek. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, storms/floods, watershed sediment California, South Central Region, Subregion VII, Santa Barbara Cell The Great Floods of 1969 AUTHOR(S): Ventura County Flood Control District Ventura County Flood Control District, Ventura, California, 110 SOURCE: , aa DATE: 09/01/69 ABSTRACT: Report on 1969 floods in Ventura. Includes hydrological and meteorological summaries. Data includes storm hydrographs for San Antonio Creek and Santa Clara River. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, storm damage, storms/floods California, South Coast Region, Subregion VII, Santa Barbara Cell Annual Summary Report of Bottom Water Motion and Sediment Transport Studies on the Inner Continental Shelf Off Southern California AUTHOR(S): Vernon, J. W.; Palmer, H. W.; Summers, H. J.; Gorsline, D. S. SOURCE: Report USC Geol 66-1, University of Southern California, Los Angeles, California, 27 pp. DATE: 01/01/66 ABSTRACT: not reviewed KEYWORDS: Coastal Processes littoral sediment, nearshore currents, sedimentation California, South Central Region, South Coast Region, San Diego Region Shelf Sediment Transport System AUTHOR(S): Vernon, J. W. SOURCE: Ph.D. Thesis, University of Southern California, Los Angeles, California, 135 pp. DATE: 01/01/66 ABSTRACT: This report describes fluorescent tracer sand movement tests as correlated with observations of the surf zone and wave climate at Huntington and Laguna Beaches, Portuguese Bend, Zuniga Shoal, and Coronado Beach.

KEYWORDS: Geomorphology, Coastal Processes geomorphic processes, grain size, littoral sediment, longshore transport, offshore/onshore transport, wave climate California, South Coast Region, San Diego Region, Subregion IX, Subregion X, San Pedro Cell, Silver Strand Cell Time-Series Study of Sanding in Ventura Harbor, California AUTHOR(S): Vieira, M. SOURCE: M. S. Thesis, U. S. Navy Post Graduate School, Monterey, California DATE: 01/01/74 ABSTRACT: not reviewed KEYWORDS: Coastal Processes sand entrapment, littoral sediment, longshore transport California, South Central Region, Subregion VII, Santa Barbara Cell Floods of January and February 1969 in Central and Southern California AUTHOR(S): Waananen, A. O. SOURCE: U. S. Department of the Interior, Geological Survey, Water Resources Division, Open File Report, Menlo Park, California, 233 pp. DATE: 05/20/69 Details of the January and February 1969 floods in ABSTRACT: California. Includes photos, descriptions, precipitation tables, storm hydrographs, sediment discharge at U. S. Geological Survey stations. Extensive streamflow and sediment tables, good overview. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, river sediment discharge, storms/floods, stream gaging California, South Central Region, South Central Region, San Diego Region Floods of January and February 1969 in Central and Southern California AUTHOR(S): Waananen, A. O. U. S. Geological Survey, Menlo Park, California, 233 pp. SOURCE: DATE: 05/20/69 ABSTRACT: A description of the storms, floods, storage regulation, flood damage, flood inundation, ground water, water quality, and sediment data for the January and February 1969 floods in California form Monterey Bay to Escondido Creek KEYWORDS: Hydrology & Hydraulics precipitation, reservoirs, river discharge, river sediment discharge, storm damage, storms/floods California, Central Coast Region, South Central Region, South Coast Region, San Diego Region Floods from Small Drainage Areas in California, A Compilation of Peak Data, October 1958 - September 1969

AUTHOR(S): Waananen, A. O. SOURCE: U. S. Geological Survey, Water Resources Division, Menlo Park, California, 146 pp. DATE: 07/09/70 ABSTRACT: Compilation of peak flow data, with both stage and discharge, for small drainage basins. Includes some hydrographs and precipitation data. KEYWORDS: Hydrology & Hydraulics precipitation, stream gaging, river discharge California, South Central Region, South Coast Region, San Diego Region The Weather and Circulation of January 1969 AUTHOR(S): Wagner, A. J. SOURCE: Montly Weather Review, Vol. 97, No. 4, pp 351-358 DATE: 04/01/69 Gives details of the high-latitude blocking which caused ABSTRACT: heavy rains on California in January 1969. Water temperatures were as much as 6 deg F. above normal in the Western Pacific. Rain was produced by a subtropical southwesterly flow in the Eastern North Pacific. KEYWORDS: Oceanography & Meteorology climatology, precipitation, storms/floods California, South Central Region, South Coast Region, San Diego Region Floods of January and February 1980 in Central Southern California AUTHOR(S): Wahl, K. L.; Crippen, J. R.; Knott, J. M. SOURCE: Open File Report 80-1005, U. S. Dept. of the Interior, Geological Survey, Menlo Park, California, 233 pp. DATE: 08/01/80 ABSTRACT: Gives brief description of storms in 1980. Data includes fluid hydrographs for Tijuana River, Arroyo Seco, Murietta Creek, Sespe Creek and Santa Clara River. KEYWORDS: Oceanography & Meteorology, Hydrology & Hydraulics precipitation, river discharge, river sediment discharge, storms/floods California, South Central Region, South Coast Region, San Diego Region Floods of January and February 1980 in California AUTHOR(S): Wahl, K. L.; Crippen, J. K.; Knoh, J. M. SOURCE: In: Proc. of Storms, Floods and Debris Flows in Southern California and Arizona, 1978 and 1980; National Academy Press, pp. 101-130 DATE: 09/17/80 Descriptions of the January and February 1980 floods in ABSTRACT: California, emphasis on Southern California. Shows flood hydrographs at selected rivers, overall descriptions, tables of precipitation, river discharge and sediment discharge. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, river sediment discharge, storm damage, storms/floods California, South Central Region, South Coast Region, San Diego Region

Petrogenesis of the Gabbro-Tonalite Sequence in the Pilgrim Creek-Morrow Hill Area, Camp Pendleton, California AUTHOR(S): Walawender, M. J. SOURCE: In : Studies on the Geology of Camp Pendleton and Western San Diego County, California, A. Ross and R. J. Dowler, Eds.; San Diego Assoc. of Geologists, San Diego, Calif., pp. 28-32 DATE: 01/01/75 ABSTRACT: Data on the petrology of these rock sequences is given. KEYWORDS: Geomorphology geology, maps, petrology California, San Diego Region, Subregion X, Oceanside Cell Monitoring Beach Erosion Control Alternatives, Southern California Examples AUTHOR(S): Waldorf, B. W.; Flick, R. E. SOURCE: Oceans '82 Conference, Washington, D. C., September 20-22, IEEE, N. Y., pp. 973-979 DATE: 09/01/82 ABSTRACT: Discusses survey monitoring methods that can be generally used to quantify the effectiveness of erosion control devices on sandy coastlines. Examples include the monitoring of Longard Tube installation at Del Mar, California. Due to high sand levels and low storm activity it was not possible to assess the effectiveness of the tube. The sand level data available on Del Mar Beach illustrates the importance of detailed baseline knowledge of the region for assessing the effectiveness of an erosion control device. KEYWORDS: Coastal Processes coastal erosion, coastal structures California, San Diego Region, Subregion X, Oceanside Cell Beach Profile Changes at Del Mar, California, May 1980 to January 1983, Data Report AUTHOR(S): Waldorf, B. W.; Flick, R. E. SOURCE: S10 Reference Series 83-3, Scripps Institution of Oceanography, Γа Jolla, California, 23 pp. DATE: 01/01/83 ABSTRACT: Beach profile data was collected in order to quantitatively monitor the seasonal sand level changes and to identify trends in erosion or accretion. KEYWORDS: Coastal Processes, Survey beach profiles, coastal erosion California, San Diego Region, Subregion X, Oceanside Cell Beach Sand Level Measurements, Oceanside and Carlsbad, California, December 1981 to February 1983, Data Report

AUTHOR(S): Waldorf, W. B.; Flick, R. E.; Hicks, D. M. SOURCE: S10 Reference Series 83-6, Scripps Institution of Oceanography, La Jolla, California, 37 pp. DATE: 04/01/83 ABSTRACT: Beach profile monitoring data gathered at Oceanside and Carlsbad, California. Also, monitored the longshore transport of beach fill at Oceanside City Beach in May 1982. KEYWORDS: Coastal Processes, Survey beach profiles, coastal erosion California, San Diego Region, Subregion X, Oceanside Cell Coastal Design Criteria in Southern California AUTHOR(S): Walker, J. R.; Nathan, R. A.; Seymour, R. J.; Strange, R. R. Coastal Engineering Abstracts, 19th Int'l Conference, Houston, SOURCE: Texas, Sept. 3-7, 1984, ASCE, pp. 186-187; and Moffatt & Nichol, Engrs., Long Beach, California, Pre-print, 17 pp. DATE: 01/01/84 ABSTRACT: This paper briefly discusses the unusual circumstances of the Pacific Ocean 1982-1983 storm conditions and the associated damages. The primary purpose was to present new data that incorporates the effects of the 1983 winter storms to reevaluate what the wave climate and design criteria may be in this highly developed coastline. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal structures, storm damage, storm surge, storm waves, wave climate, wave transformation California, South Central Region, Measurement of Wave Energy Transmission Through the San Pedro Breakwater AUTHOR(S): Walther, J. A.; Lee, J. J. Report No. USC-SG-1-75, University of Southern California, Los SOURCE: Angeles, California, 100 pp. DATE: 05/01/75 A method for measuring the wave energy transmission ABSTRACT: character- istic of a breakwater by means of seafloor mounted wave sensors is described. The instrumentation is designed to measure the amplitude of surface waves having frequencies in the range of 10 to 100 mHz (wave periods of 10 to 100 seconds). Field studies were conducted on the San Pedro Breakwater of the Long Beach-Los Angeles Harbor in Southern California. KEYWORDS: Coastal Processes coastal structures, wave climate, wave transformation California, South Coast Region, Subregion IX,

Computer Algorithm to Calculate Longshore Energy Flux and Wave Direction From a

Two Pressure Sensor Array AUTHOR(S): Walton, T. L., Jr.; Dean, R. G. SOURCE: CERC Tech. Paper 82-2, U. S. Army Corp of Engineers, Coastal Engineering Research Center, Vicksburg, Miss., 33 pp. DATE: 08/01/82 ABSTRACT: A documented (FORTRAN IV) computer program is discussed as originally written for the CERC Longshore Sand Transport Research Program to analyze wave data collected at Channel Islands Harbor, California. KEYWORDS: Coastal Processes longshore current, longshore transport, wave climate, wave transformation California, South Central Region, Subregion VII, Santa Barbara Cell Some Factors in Planning Marinas AUTHOR(S): Ward, G. D.; Cushman, M. M. Journal of Waterways and Harbors Divn., Vol. 93, No. WW2, Proc. SOURCE: Paper 5234, ASCE, N. Y., pp. 203-212 DATE: 05/01/67 ABSTRACT: Some factors in planning marinas are evaluated, including determinations to establish site, size, and tributary area. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, institutions/planning/mgmt. California, South Central Region, South Coast Region, San Diego Region Development and Field Tests of a Sampler for Suspended Sediment in Wave Action AUTHOR(S): Watts, G. M. SOURCE: U. S. Army Corps of Engineers, Beach Erosion Board, BEB Tech. Memo, 34 pp. DATE: 03/01/53 Describes development of a mechanical sampler to extract a ABSTRACT: representative sample of wave suspended sediment and measure the quantity of water from which it is extracted. Results of field tests made at Pacific Beach, California with analyses of their significance. KEYWORDS: Coastal Processes littoral sediment, longshore transport, offshore/onshore transport California, San Diego Region, Subregion X, Mission Bay Cell Sediment Discharge to the Coast as Related to Shore Processes AUTHOR(S): Watts, G. W. SOURCE: For: Federal Interagency Sedimentation Conference of the Subcommittee on Sedimentation, ICWR, Jackson, Mississippi, 28 Jan.-1 Feb., 1963;U.S.A.C.E., Los Angeles Distr., Calif DATE: 01/29/63 ABSTRACT: Report quotes an estimate of 611,000 cy per year of sand coming to the coast from the Ventura Area. KEYWORDS: Hydrology & Hydraulics, Coastal Processes river sediment discharge California, South Central Region, Subregion VII, Santa Barbara Cell

Meteorology of Hydrologically Critical Storms in California AUTHOR(S): Weaver, R. L. SOURCE: Hydrometeorological Report No. 37, U. S. Department of Commerce. Weather Bureau, Washington, D. C., 207 pp. DATE: 12/01/62 ABSTRACT: Discusses in detail several storms in southern and northern California as examples of typical weather patterns. Includes data. KEYWORDS: Oceanography & Meteorology climatology, precipitation, storms/floods, wind California Geology and Mineral Resources of San Diego County, California AUTHOR(S): Weber, F. H. SOURCE: County Report 3, California Division of Mines and Geology, Sacramento, California, 309 pp. DATE: 01/01/63 ABSTRACT: The report contains discussions of the mineral resources of the county, followed by descriptions of deposits. Descriptions of more than 500 deposits are given, either within the text or in tabulated lists. KEYWORDS: Geomorphology cliff sediment, geology, maps, mining, watershed sediment California, San Diego Region, Subregion X, Oceanside Cell Geology and Mineral Resources Study of Southern Ventura County, California AUTHOR(S): Weber, F. H. Preliminary Report 14, California Division of Mines and SOURCE: Geology, Sacramento, California, 102 pp. DATE: 01/01/73 ABSTRACT: This report describes the geology and mineral resources of Southern Ventura County, California. KEYWORDS: Geomorphology geology, maps, mining, watershed sediment California, South Central Region, Subregion VII, Santa Barbara Cell Geology and Mineral Resource Study of Southern Ventura County, Map AUTHOR(S): Weber, F. H.; Cleveland, G. B.; Kahle, J. E.; Kiessling, E. F. SOURCE: Preliminary Report 14, California Division of Mines and Geology, Los Angeles, California DATE: 01/01/73 Geologic map, scale 1:48,000. ABSTRACT: KEYWORDS: Geomorphology geology, maps, watershed sediment, mining California, South Central Region, Subregion VII, Santa Barbara Cell Sediment Budget Calculations, Oceanside, California, Final Report AUTHOR(S): Weggel, J. R.; Clark, G. R. SOURCE: For: U. S. Army Corps of Engineers, Los Angeles District, Coastal

Engineering Research Center, Vicksburg, Miss., CERC Misc. Paper 83-7, 55 pp. DATE: 12/01/83 ABSTRACT: A sediment budget was constructed for the Oceanside, California, area to predict the effect on adjacent beaches of two alternative solutions--groins and nearshore breakwater--to the Oceanside erosion problem. The pre-project sediment budget was modified and assumptions made about the performance of each proposed project. The report discussed briefly each of the sources for data used in the budget, set up the sediment balance equations, solved the equations under several sets of assumptions for conditions prevailing in the 1950-1972 time period, and then used this pre-project sediment budget to KEYWORDS: Coastal Processes coastal structures, littoral sediment, longshore transport, offshore/onshore transport, river sediment discharge, shoreline changes California, San Diego Region, Subregion X, Oceanside Cell Offshore Surficial Geology of California AUTHOR(S): Welday, E. E.; Williams, J. W. SOURCE: Map Sheet 26, California Division of Mines and Geology, Sacramento, California DATE: 01/01/75 ABSTRACT: Provides an overview of the offshore distribution of rock and the various bottom sediments. It is a synthesis of 46 maps compiled by the Division of Mines and Geology geologists from various sources which interpret data obtained by the Division prior to mid-1974. Map scale 1:125,000. KEYWORDS: Geomorphology, Coastal Processes geology, grain size, littoral sediment, sedimentation, maps California, South Central Region, South Coast Region, San Diego Region Effect of Fire on Soil AUTHOR(S): Wells, W. G.; et al. SOURCE: Gen. Tech. Report WO-10, U. S. Department of Agriculture, Forest Service, Washington, D. C., 34 pp. DATE: 03/01/79 ABSTRACT: State of knowedge review of fire effects on soil. Discusses water repellent soils produced by fires, erosion, emphasis on southwest. KEYWORDS: Hydrology & Hydraulics fires, sedimentation, watersheds, watershed sediment California, South Central Region, South Coast Region, San Diego Region Some Effects of Brush Fires on Erosion Processes in Coastal Southern California AUTHOR(S): Wells, W. G. SOURCE: In: Proc. of a Erosion and Sediment Transport in Pacific Rim

Steeplands Symposium; Int. Assoc. of Hydrologic-Science, Publication No. 132, Christchurch, New Zealand, pp. 305-342 DATE: 01/25/81 ABSTRACT: Effect of periodic brush fires on sedimentation in Southern California. Effects of water-repellent soils and theory of rill formation; water-repellent soils and rill formation account for large part of sediment increase after fires. KEYWORDS: Hydrology & Hydraulics fires, sedimentation, watershed sediment California, South Coast Region, South Central Region Hydrology of Mediterranean-Type Ecosystems: A Summary and Synthesis AUTHOR(S): Wells, W. G. In: Proc. of Symposium of Dynamics and Management of SOURCE: Mediterranean-Type Ecosystems, June 22-26, 1981,; Gen Tech Rpt. PSW-58, PSW F&R Exp. Sta., Berkeley, California, pp. 426-429 DATE: 06/22/81 ABSTRACT: Points out that there is little relationship between watershed slopety and sediment yield in Southern Californai. Discusses effects of fires on sediment delivery to the coast, water quality and water yield. KEYWORDS: Hydrology & Hydraulics fires, sedimentation, watersheds, river sediment discharge, watershed sediment California, South Central Region, South Coast Region, San Diego Region Role of Vegetation in Sedimentation Processes of Coastal Southern California AUTHOR(S): Wells, W. G.; Palmer, N. R. SOURCE: In: Sediment Management for Southern California Mountains, Coastal Plains and Shoreline; Cal Tech Environmental Quality Laboratory Report 17-D, Pasadena, California, pp. 51-99 DATE: 06/01/82 ABSTRACT: A basic introduction to vegetation and the role of vegetation in erosional processes in Southern California. Includes maps of present day and original vegetation in Southern California coastal zone. Discusses vegetation classes, and their effects on erosion and sedimentation. KEYWORDS: Hydrology & Hydraulics urbanization, watersheds, watershed sediment, river sediment discharge California, South Central Region, South Coast Region, San Diego Region Effects of Fire on Sedimentation Processes AUTHOR(S): Wells, W. G.; Brown, W. M. SOURCE: In: Sediment Management for Southern California Mountains, Coastal Plains and Shoreline; Cal Tech Enviornmental Quality Laboratroy Report 17-D,

Pasadena, California, pp. 83-120 DATE: 06/01/82 ABSTRACT: Review of fire effects on sedimentation processes. Includes fire history map of coastal watersheds from Point Conception to the Mexican Border. Examines problems, particulary in Southern California: vegetation, including chaparral and coastal sage, climate, and Santa Cruz winds. KEYWORDS: Hydrology & Hydraulics fires, watersheds, watershed sediment California, South Central Region, South Coast Region, San Diego Region Draft Supplemental Environmental Statement, Santa Margarita Project, San Diego, California AUTHOR(S): Welsh, R.; Bryant, G. L.; Einert, M. P. SOURCE: U. S. Dept. of Interior, Bureau of Reclamation, Boulder City, Nevada, 174 pp. DATE: 04/05/84 ABSTRACT: Data on the production of sediment and the geology of the Santa Margarita River are given with reference to transport of sand into the littoral zone. KEYWORDS: Geomorphology, Coastal Processes, Hydrology & Hydraulics river sediment discharge, estuarine sediment storage, geology, littoral sediment, river-bed sediment, watershed sediment California, San Diego Region, Subregion X, Oceanside Cell Proximal Turbidite Environment, San Clemente State Park AUTHOR(S): Weser, O. E. SOURCE: In : Geologic Guide Book, Newport Lagoon to San Clemente, California; Coastal Exposures of Miocene and Early Pliocene Rocks, pp. 1-26 DATE: 10/23/71 ABSTRACT: Detailed photographs with lithologic descriptions of the coastal cliffs at San Clemente State Park. KEYWORDS: Geomorphology cliff sediment, geology, maps California, San Diego Region, Subregion X, Oceanside Cell Observations of the California Countercurrent AUTHOR(S): Wickam, J. B. SOURCE: Journal of Marine Research, Vol. 33, No. 3, pp. 325-340 DATE: 01/01/75 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents California An Analysis of Data From Wave Recorders on the Pacific Coast of the United States AUTHOR(S): Wiegel, R. L.

SOURCE: Amer. Geophysical Union Transactions, Vol. 30, No. 5, pp. 700-704 DATE: 01/01/49 not reviewed ABSTRACT: KEYWORDS: Coastal Processes wave climate, wave transformation California Southern Swell Observed at Oceanside, California AUTHOR(S): Wiegel, R. L.; Kimberly, H. L. SOURCE: EOS, Trans. Amer. Geophysical Union, Vol. 31, No. 5, pp. 717-722 DATE: 01/01/50 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Southern Swell Observed at Oceanside, California AUTHOR(S): Wiegel, R. L.; Kimberley, H. L. SOURCE: Trans. American Geophysical Union, Vol. 31, No. 5, pp. 717-722 DATE: 10/01/50 Discusses meteorological conditions in Pacific Ocean. ABSTRACT: Includes observations and measurements of southern swell at Oceanside in Northern Hemisphere summer. Presents mean weather maps and shows relationship to southern swell. KEYWORDS: Oceanography & Meteorology wave climate California, San Diego Region, Subregion X, Oceanside Cell Wave, Longshore Current, and Beach Profile Records for Santa Margarita River, Oceanside, California AUTHOR(S): Wiegel, R. L.; Patrick, D. A.; Kimberley, H. L. SOURCE: American Geophysical Union, Vol. 35, No. 6 Part 1, pp. 887-896 DATE: 12/01/54 The results of ten months of measurements of waves, longshore ABSTRACT: currents, and beach conditions for Santa Margarita River Beach are presented. Sediment samples were collected and were analysed for texture and mineralogy. KEYWORDS: Geomorphology, Coastal Processes grain size, littoral sediment, petrology, beach profiles, longshore current, longshore transport California, San Diego Region, Subregion X, Oceanside Cell Sand Bypassing at Santa Barbara, California AUTHOR(S): Wiegel, R. L. SOURCE: Journal of Waterways and Harbors Divn., Vol. 85, WW2 No. 1, ASCE, N. Υ. DATE: 01/01/59 ABSTRACT: not reviewed KEYWORDS: Coastal Processes beach nourishment/dredging, coastal structures, longshore transport

California, South Central Region, Subregion VII, Santa Barbara Cell Suspended Sediment Over the Continental Shelf Off Southern California AUTHOR(S): Wildharber, J. L. SOURCE: Masters Thesis, University of Southern California, Los Angeles, California, 159 pp. DATE: 01/01/66 not reviewed ABSTRACT: KEYWORDS: Coastal Processes sedimentation California, South Central Region, South Coast Region, San Diego Region California Coastal Salt Marsh Restoration Design AUTHOR(S): Williams, P. B.; Harvey, H. T. SOURCE: Coastal Zone '83, Symposium, San Diego, California, June 1-4, 1983; ASCE, N. Y., Vol. II, pp. 1444-1455 DATE: 01/01/83 Describes the biologic, hydrologic, and engineering ABSTRACT: constraints on designing and implementing salt marsh restoration and enhancement projects along the coasts and estuaries of California. KEYWORDS: Coastal Processes environmental constraints, estuarine sediment storage, tidal inlets California Sediment Discharge in the Santa Clara River Basin, Ventura and Los Angeles Counties, California AUTHOR(S): Williams, R. P. SOURCE: U. S. Dept. of Interior, Geological Survey, Water Resources Investigations 1978-1979, 51 pp. DATE: 08/01/79 ABSTRACT: Sediment data collected in the Santa Clara River in California basin during the 1967-75 water years were analyzed to determine the particle size and quantity of sediment transported past three gaging stations. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics grain size, river sediment discharge California, South Central Region, Subregion VII, Santa Barbara Cell Sediment Discharge in the Santa Clara River Basin, Ventura and Los Angeles Counties, California AUTHOR(S): Williams, R. P. Report No. USGS/WRI 79-78, U. S. Dept. of Interior, Geological SOURCE: Survey, Water Resources Division, Menlo Park, California, 56 pp. DATE: 08/01/79 ABSTRACT: A sediment discharge versus water discharge relation was developed based on sediment measurements on the Santa Clara River between 1967-1975. This was applied to water discharge records between 1928 and 1975 to estimate average

annual sediment transport. KEYWORDS: Hydrology & Hydraulics river sediment discharge California, South Central Region, Subregion VII, Santa Barbara Cell Sediment Discharge in the Santa Clara River Basin, Ventura and Los Angeles Counties, California AUTHOR(S): Williams, R. P. SOURCE: Water Resources Investigation 79-78, U. S. Geological Survey, Menlo Park, California, 51 pp. DATE: 08/01/79 ABSTRACT: Sediment data collected from 1968 to 1975 were used to estimate the sediment discharge from the Santa Clara River. Finds 55 precent transported in two (2) days and 93 percent in 53 days days. Gives size distribution. Long term yield estimated at 3.67 million tons annually. KEYWORDS: Hydrology & Hydraulics grain size, mining, reservoirs, river discharge, river sediment discharge California, South Central Region, Subregion VII, Santa Barbara Cell Sediment Discharge in the Santa Clara River Basin, Ventura and Los Angeles Counties, California AUTHOR(S): Williams, R. P. SOURCE: Report No. USGS/WRI 79-78, U. S. Dept. of Interior, Geological Survey, Water Resources Division, Menlo Park, California, 56 pp. DATE: 08/01/79 ABSTRACT: A sediment discharge versus water discharge relation was developed based on sediment measurements on the Santa Clara River between 1967-1975. This was applied to water discharge records between 1928 and 1975 to estimate average annual sediment transport. KEYWORDS: Hydrology & Hydraulics river sediment discharge California, South Central Region, Subregion VII, Santa Barbara Cell Analysis of Boat Traffic Conditions in Marina del Rey AUTHOR(S): Williams-Kuebelbeck and Assoc. SOURCE: For: Summa Corporation, Van Nuys, California; Williams-Kuebelbeck and Associates, Inc., Marina del Rey, California, 50 pp. DATE: 03/01/81 ABSTRACT: Presents the results of a study analyzing present and projected boat traffic conditions in the Marina del Rey Harbor. An evaluation of the potential boat traffic impacts of a planned addition of berthing facilities adjacent to the marina is also presented. KEYWORDS: Coastal Processes, Socioeconomics

coastal structures, growth potential/recreation, institutions/planning/mgmt., population, shoreline use California, South Coast Region, Subregion VIII, Santa Monica Cell Texture Comparison of Insular and Mainland Shelf Sediments, Continental Borderland, California AUTHOR(S): Willis, D. K. M. S. Thesis, University of Southern California, Los Angeles, SOURCE: California, 144 pp. DATE: 01/01/79 ABSTRACT: Surface sediment samples were analyzed from the offshore shelf area south of Point Dume, and the shelf area on the northwest trending Catalina Ridge, north of Catalina Island. Each area is compared for mainland and insular margin environments in terms of textural parameters, size distribution and carbonate content. KEYWORDS: Geomorphology, Coastal Processes geology, grain size, maps, littoral sediment California, South Coast Region, Subregion VIII Wave and Surge-Action Study for Los Angeles-Long Beach Harbors, Volume 1, Final Report AUTHOR(S): Wilson, B. W.; Yuan, J.; Hendrickson, J. A.; Soot, H. For: U. S. Army Corps of Engineers, Los Angeles District; SOURCE: Science Engineering Associates, San Marino, California, 362+ pp. DATE: 07/01/68 Volume 1 discusses the existing knowledge of the surge ABSTRACT: phenomenon. An attempt is made to trace its effect upon the development of the Los Angeles-Long Beach Harbor through history to the present. The influence of the surge action is analyzed as it impacts on shipping; the critical causative wave frequencies are isolated, and the extent to which wave amplitudes have to be reduced to render the harbor free of surge difficulties is addressed. Includes a general discussion of wave climate and wave transformation in the vicinity of the harbors. KEYWORDS: Coastal Processes, Oceanography & Meteorology storm waves, tides, wave climate, wave transformation California, South Coast Region, Subregion IX, San Pedro Cell Tsunami-Responses of San Pedro Bay and Shelf, California AUTHOR(S): Wilson, B. W. SOURCE: Journal of Waterways and Harbors, Proc. Paper 8107, Vol. 97, No. WW2, ASCE, N. Y., pp. 239-257; and Closure, Vol. 98, No. WW4, Nov. 1972, ASCE, N. Y., pp. 575-579

DATE: 05/01/71 ABSTRACT: The lowest modes of free oscillation of the continental shelf off San Pedro Bay, California are determined analytically from geometric models. Lowest modes of oscillation of adjacent ocean basins most likely to affect San Pedro Bay are also determined by modeling. Discussion by F. Raichlen, Vol. 98, No. WW1, Feb. 1972, Proc. Paper 8686, pp. 103-110. Includes energy density spectra data. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal structures, tsunamis, wave climate, wave transformation California, South Coast Region, Subregion IX, Marine Weather Log AUTHOR(S): Wilson, E. E. SOURCE: U. S. Dept. of Commerce, Environmental Data Service, National Oceanic and Atmospheric Administration, Washington, D. C., Vol. 19, No. 2 DATE: 03/01/75 ABSTRACT: Includes three articles (abstracted separately) concerning extreme wind and wave return periods for the U.S. coast; satellite detection of upwelling in the Gulf of Tehuantepec, Mexico; and Eastern North Pacific tropical cyclones, 1974. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, remote sensing, storms/floods, wave climate, wind California, Mexico Mariner's Weather Log AUTHOR(S): Wilson, E. E. NOAA, Environmental Data And Information Service, Wash., D. C., SOURCE: Report No. NOAA-80080503, Vol. 24, No. 4, 85 pp. (and Vol. 24, No. 2, NTIS PB80-188444) DATE: 08/01/80 ABSTRACT: This issue includes the following articles: Coastal Storms in Southern California, Unusual Winter Storm, Hawaii and and Western North Pacific Typhoons, 1979. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, storms/floods California, South Central Region, South Coast Region, San Diego Region Design for Optimum Wave Conditions, Dana Point Harbor, Dana Point, California AUTHOR(S): Wilson, H. B. SOURCE: U. S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss., WES Tech. Report No. 2-724, 28 pp. DATE: 06/01/66 ABSTRACT: Hydraulic models of breakwaters to determine effectiveness in providing protection within harbor from storm wave action. Includes data. KEYWORDS: Coastal Processes

coastal structures, wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell Sediments of the Southern California Mainland Shelf AUTHOR(S): Wimberly, S. SOURCE: Ph.D. Thesis, University of Southern California, Los Angeles, California, 207 pp. DATE: 01/01/64 ABSTRACT: Describes the texture of sediments collected from the Southern California mainland shelf. KEYWORDS: Geomorphology, Coastal Processes geology, grain size, littoral sediment, maps California, South Central Region, South Coast Region, San Diego Region Internal Surges in Coastal Waters AUTHOR(S): Winant, C. D. SOURCE: Journal of Geophysical Research, Vol. 79, No. 30, pp. 4523-4526 DATE: 10/20/74 ABSTRACT: A multiple element thermistor chain was installed at the end of Scripps pier in La Jolla, California, in five meters of water along with а pressure sensor to record sea surface fluctuations. Temperature differences of up to 5 C between the bottom and the surface have been measured. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, San Diego Region, Subregion X, Oceanside Cell The Vertical Structure of Coastal Currents AUTHOR(S): Winant, C. D.; Olson, J. R. SOURCE: Deep Sea Research, Vol. 23, pp. 925-936 DATE: 01/01/76 ABSTRACT: A vertical array of four equidistant current meters was used to measure horizontal currents in 18 meters of water. The instru- ments resolved frequencies up to 15 cph for a period of 33 days in late summer 1974. Onshore (EW) and longshore (NS) currents were essentially uncorrelated at all depths. Longshore currents exhibit significant coherence with the surface tide but not at frequencies higher than the tidal frequencies. The effect of a southerly wind lasting over 3 days was evident as a northbound current that was most intense near the surface. The spectrum of onshore currents exhibits a peak at the semidiurnal frequency corresponding to internal tides, and there is a second lower, but broader, peak at frequencies between 1 cph and the buoyancy frequency. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, longshore current, nearshore currents, tides California

Stability and Impulse Response of Empirical Eigenfunctions AUTHOR(S): Winant, C. D.; Aubrey, D. G. SOURCE: Chapter 77, Proceedings of 15th Coastal Engineering Conference, Honolulu, Hawaii, July 11-17, ASCE, N. Y., pp. 1312-1325 DATE: 01/01/76 ABSTRACT: The statistical method of empirical eigenfunctions has been applied to 4 years of beach profile data from Torrey Pines Beach, California, taken at monthly intervals. KEYWORDS: Coastal Processes beach profiles, longshore transport, offshore/onshore transport California, San Diego Region, Subregion X, Oceanside Cell A Study of Physical Parameters in Coastal Waters Off San Onofre, California, Semi-Annual Report AUTHOR(S): Winant, C. D.; Davis, R. E.; Severance, R. W. S10 Reference Series 77-3 for Marine Review Committee, Inc., SOURCE: Scripps Institution of Oceanography, La Jolla, California, 113 pp. DATE: 01/31/77 Ocean currents off San Onofre. ABSTRACT: KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, San Diego Region, Subregion X, Oceanside Cell A Study of Physical Parameters in Coastal Waters Off San Onofre, California, Final Report AUTHOR(S): Winant, C. D.; Davis, R. E.; Severance, R. W. SOURCE: S10 Reference Series 77-11, Scripps Institution of Oceanography, La Jolla, California, 106 pp. DATE: 06/30/77 ABSTRACT: Characterizes ocean currents off San Onofre. A significant data base has been recorded and supplemented by seven surface drogue studies. Supports other studies that indicate onshore- offshore and longshore directions form a natural set of axes in which to study nearshore currents. One drogue track (of 50) suggests the presence of an eddy in the downstream wake of San Mateo point; the rest show a prevailing surface current direction for each study with minor variations in direction. Evidence suggests longshore currents increase in magnitude offshore. Some data loss occurred early in the program, but data recovery is now approaching 100 percent. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, San Diego Region, Subregion X, Oceanside Cell A Comparison of Some Shallow Wind-Driven Currents

AUTHOR(S): Winant, C. D.; Beardsley, R. C.

SOURCE: Journal of Physical Oceanography, Vol. 9, No. 1, pp. 218-220 DATE: 01/01/79 ABSTRACT: Four sets of current measurements (one of which is from a narrow shelf off Southern California) are compared. Response of water column to wind forcing is examined. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, wind, nearshore currents California Coastal Current Observations AUTHOR(S): Winant, C. D. SOURCE: Reviews of Geophysics and Space Physics, Vol. 17, No. 1, pp. 89-98 DATE: 02/01/79 Field observations of the characteristics of coastal ABSTRACT: currents. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, tides California, South Central Region, San Diego Region, Subregion X, Oceanside Cell Coastal Circulation and Wind-Induced Currents AUTHOR(S): Winant, C. D. SOURCE: Annual Review Fluid Mechanics, Vol. 12, pp. 271-301 DATE: 01/01/80 ABSTRACT: Observations of a spectrum of summer currents off Del Mar, California is reproduced (rotary spectra). KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, San Diego Region, Subregion X, Oceanside Cell Temperature and Currents On the Southern California Shelf: A Description of the Variability AUTHOR(S): Winant, C. D.; Bratkovich, A. W. Journal of Physical Oceanography, Vol. II, No. 1, pp. 71-86 SOURCE: DATE: 01/01/81 ABSTRACT: Temperature and horizontal current observations at three water depths (15, 30, and 60 meters) over the Southern California shelf are reported for four discrete periods during 1978-79, roughly corresponding to each of the principal seasons. The vertical structure of temperature changes markedly during the year; the water over the shelf is weakly stratified in the winter but stratification is stronger in the summer. Seasonal changes in vertically averaged temperature are comparatively unimportant. The principal mode of variability associated with longshore tidal currents is barotropic, while that associated cross-shelf currents is baroclinic. The motion in the crossshelf plane resembles that due to a standing gravest-mode

KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, tides California, South Central Region, South Coast Region, San Diego Region Longshore Coherence of Currents On the Southern California Shelf During Summer AUTHOR(S): Winant, C. D. SOURCE: Journal of Physical Oceanography, Vol. 13, No. 1, pp. 54-64 DATE: 01/01/83 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, South Central Region, South Coast Region, San Diego Region The Longshore Coherence of Currents On the Southern California Shelf During Winter, A Data Report AUTHOR(S): Winant, C. D.; Holmer, R. C. SOURCE: S10 Reference Series 83-22, Scripps Institution of Oceanography, La Jolla, California, 44 pp.; and Journal of Phys. Oceanography, Vol. 13, No. 1, pp. 54-64 DATE: 10/01/83 Velocity and temperature measurements were recorded from ABSTRACT: January-May 1983 between Del Mar and Dana Point, California, using VMCM current meters. Statistics and time series of the data are presented. A data tape containing current meter data was made. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, South Central Region, South Coast Region, San Diego Region Geology of Southeastern Ventura Basin, Los Angeles County, California AUTHOR(S): Winter, E. L.; Durham, D. L. Professional Paper 334-H, U. S. Dept. of Interior, Geological SOURCE: Survey, Wash. D. C., 366 pp. DATE: 01/01/62 This report describes the geology of the Southeastern Ventura ABSTRACT: Basin. KEYWORDS: Geomorphology geology, maps, mining, neotectonics, watershed sediment California, South Central Region, Subregion VII, Santa Barbara Cell A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas AUTHOR(S): Winzler & Kelly SOURCE: Vols. I-IV, under U. S. Dept. of Interior, BLM Contract AA550-CT6-52; Winzler & Kelly, Consulting Engineers, Eureka, California, 400+ pp. each part (4 parts) DATE: 08/01/77

ABSTRACT: Vol. I - Physical Conditions; and Vol. III - Socioeconomic Conditions. Includes data. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics climatology, growth potential/recreation, institutions/planning/mgmt., population, shoreline changes, wave transformation California, South Central Region, Subregion VI, Subregion VII Geological Studies in the California Borderland, Final Report AUTHOR(S): Wishner, K.; Hess, G. SOURCE: Cruise Report of Expedition MEL 1-76-SC, S10 Reference 77-1, Scripps Institution of Oceanography, La Jolla, California, 4 pp. DATE: 01/01/77 ABSTRACT: The MEL 1-76-SC expedition consisted of near-bottom geological studies of five California Borderland sites: Tanner Bank, eastern slope of San Nicolas Island, northwest extension of San Clemente Escarpment, Navy Fan, and the San Diego Trough. Faulting, sediment depositional and erosional processes especially slumping, and fan development processes are studied. Previously unmapped fault scarps were observed along the upper slope of Tanner Bank. Evidence for sediment mass transport by slumping and turbidity currents were major survey objectives near San Nicolas, San Clemente, and Navy Fan. Patterns of channels, hummocks, and scours were found in Navy Fan. Near- bottom plankton samples collected from the San Diego Trough KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes California, San Diego Region, Subregion X The Strategic Role of Perigean Spring Tides in Nautical History and North American Coastal Flooding, 1635-1976 AUTHOR(S): Wood, F. J. SOURCE: U. S. Dept. of Commerce, NOAA, National Oceanic Survey, Washington, D. C., 539 pp. DATE: 01/01/79 ABSTRACT: Origin, nature, and impact of severe tidal flooding of lowland and coastal regions resulting from coincidence of astronomical and meteorological forces. Coastal flooding, damage, and tides data. KEYWORDS: Coastal Processes, Oceanography & Meteorology storm damage, storms/floods, storm surge, storm waves, tides, wave climate California, South Central Region, South Coast Region, San Diego Region Astronomical and Tidal Analyses of Unusual Currents in a Submarine Canyon During Proxigee-Syzygy Alignment AUTHOR(S): Wood, F. J.

SOURCE: Shore and Beach, Vol. 49, No. 1, pp. 35-36 DATE: 01/01/81 ABSTRACT: Accelerated upcanyon currents observed along axis of La Jolla submarine canyon (as described in Shepard, et. al., Jan. 1984) are explained. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents, submarine canyons, tides California, San Diego Region, Subregion X, Oceanside Cell Early 20th Century Uplift of the Northern Peninsular Ranges Province of Southern California AUTHOR(S): Wood, S. H.; Elliott, M. R. SOURCE: Tectonophysics, Vol. 52, pp. 249-265 DATE: 01/01/79 ABSTRACT: This report estimates rates of tectonic uplift based on physiographic features. KEYWORDS: Geomorphology maps, neotectonics California, San Diego Region, Subregion X, Oceanside Cell Geology and Ground Water Resources of the Santa Maria Valley Area, California AUTHOR(S): Worts, G. F. Water Supply Paper 1000, U. S. Dept. of Interior, Geological SOURCE: Survey, Washington, D. C., 169 pp. DATE: 01/01/51 ABSTRACT: This report describes the geology and ground water of the Santa Maria Valley. Geologic maps scale 1:38,000. KEYWORDS: Geomorphology geology, maps, watershed sediment California, South Central Region, Subregion VI, Santa Maria River Cell Major Heavy Mineral Assemblages and Heavy Mineral Provinces of the Central California Coast Region AUTHOR(S): Yancy, T. E.; Lee, J. W. Geologic Society of America Bulletin, Vol. 83, pp. 2099-2104 SOURCE: DATE: 01/01/72 This report gives a detailed list of minerals and describes ABSTRACT: five mineral assemblages along the Central California Coast. KEYWORDS: Geomorphology cliff sediment, geology, geomorphic processes, maps, watershed sediment California, South Central Region, Subregion VI, Morro Bay Cell Origin of Redondo Submarine Canyon, Southern California AUTHOR(S): Yerkes, R. F.; Gorsline, D. S.; Rusnak, G. A. SOURCE: U. S. Dept. of Interior, Geological Survey, Professional Paper 575-C, pp. C97-C105 DATE: 01/01/67 ABSTRACT: not reviewed KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, submarine canyons California, South Coast Region

Maps Showing Faults, Fault Activity and Epicenters, Focal Depths and Focal Mechanics for 1970-75 Earthquakes, Western Transverse Range, California AUTHOR(S): Yerkes, R. F.; Lee, W. H. SOURCE: Map Sheets MF-1032, U. S. Dept. of Interior, Geological Survey, Reston, Virginia DATE: 01/01/79 ABSTRACT: Two map sheets with seismic data. Scale 1:250,000. KEYWORDS: Geomorphology geology, geomorphic processes, maps, neotectonics California, South Central Region, Subregion VII, Santa Barbara Cell Geologic Map of East-Central Santa Monica Mountains, Los Angeles County, California AUTHOR(S): Yerkes, R. F.; Campbell, R. H. Miscellaneous Investigations Series, Map I-1146, U. S. Dept. of SOURCE: Interior, Geological Survey, Washigton, D. C. DATE: 01/01/80 ABSTRACT: Geologic map, scale 1:24,000. KEYWORDS: Geomorphology geology, maps, watershed sediment California, South Coast Region, Subregion VIII, Santa Monica Cell Seismotectonic Setting of the Santa Barbara Channel Area, Southern California AUTHOR(S): Yerkes, R. F.; Greene, H. G.; Tinsley, J. C.; La Joie, K. R. SOURCE: Miscellaneous Field Investigations Map, MF-1169, U. S. Dept. of Interior, Geological Survey, Reston, Virginia DATE: 01/01/81 ABSTRACT: Map scale 1:250,000. Describes the tectonic framework of the region along with a seismic analysis of earthquakes in terms of regional landform uplift. Report ties in age dates for coastal tectonics. KEYWORDS: Geomorphology geology, geomorphic processes, maps, neotectonics California, South Central Region, Subregion VII Erosion and Sedimentation in San Diego County Watersheds AUTHOR(S): Yono, T.; Kanga, F.; Qazi, I. SOURCE: Southern District Report, State of California, Department of Water Resources, Sacramento, California, 61 pp. DATE: 07/01/77 ABSTRACT: Analysis of watershed erosion and sedimentation in selected San Diego watersheds, including: San Marcos Creek (erosion estimates of 320 ton/sq. mi.) Escondido Creek (620), Lower San Dieguito River (320), Upper San Diego River (530), and Sweetwater River (320). Includes fire history with maps and areas burned from 1911 to 1959 and 1951 to 1975. Discusses fire effects, urbanization and mining. KEYWORDS: Hydrology & Hydraulics fires, mining, urbanization, watershed sediment, sedimentation

California, San Diego Region, Subregion X Magnitude and Frequency of Floods in the United States, Part 11, Pacific Slope Basins in California AUTHOR(S): Young, L. E.; Cruff, R. W. SOURCE: Water-Supply Paper 1685, U. S. Geological Survey, Washington, D. C., 272 pp. DATE: 01/01/67 ABSTRACT: Data on stream gages for major rivers, creeks and drainage basins in California. Gives details on the gages; maximum floods in terms of stage and discharge. KEYWORDS: Hydrology & Hydraulics river discharge, stream gaging, storms/floods California, South Central Region, South Coast Region, San Diego Region Texture and Mineralogy of Heavy Mineral Enriched Beach Sand, Dockweiller State Beach, Southern California AUTHOR(S): Yudovin, S. M. M. S. Thesis, University of Southern California, Los Angeles, SOURCE: California, 111 pp. DATE: 01/01/79 ABSTRACT: This report describes the textural relationships between associated heavy and light minerals, and heavy mineral textural parameters, for sands on a heavy mineral-enriched beach. KEYWORDS: Geomorphology, Coastal Processes geomorphic processes, grain size, littoral sediment, petrology California, South Coast Region, Subregion VIII, Santa Monica Cell A General Reconnaissance of Coastal Dunes of California AUTHOR(S): Zeller, R. P. BEB Misc. Paper 1-62, U. S. Army Corps of Engineers, Beach SOURCE: Erosion Board, Washington, D. C., 38 pp. DATE: 06/01/62 ABSTRACT: Describes the formation of sand dunes at many locations along the coast, and examines their common features, forms, beach configuration and conditions, activity of dune sand, and sediment sources. KEYWORDS: Coastal Processes, Geomorphology beaches, dunes, geology, geomorphic processes, wind transport California, South Central Region, South Coast Region, San Diego Region Predicted Extreme High Tides for Mixed Tide Regions AUTHOR(S): Zetler, B. D.; Flick, R. E. SOURCE: Submitted to: Journal of Physical Oceanography, 9 pp. DATE: 09/21/84 ABSTRACT: Tide predictions to the year 2000 for four California ports were prepared so that information on extreme high tides could be tabulated. KEYWORDS: Coastal Processes, Oceanography & Meteorology

tides California Predicted Extreme High Tides for California, 1983-2000 AUTHOR(S): Zetler, B. D.; Flick, R. E. SOURCE: Journal of Waterways, Port, Coastal, Ocean Div., ASCE, N. Y., 14 pp. (In Press) DATE: 01/01/85 ABSTRACT: Standard harmonic tide predictions have been prepared for San Diego, Los Angeles, San Francisco and Humboldt Bay to the year 2000. KEYWORDS: Coastal Processes, Oceanography & Meteorology tides California Preliminary Map Showing Recency of Faulting in Coastal Southern California AUTHOR(S): Ziony, J. I.; Wentworth, C. M.; Buchanan-Banks, J. M.; Wagner, H. C. Miscellaneous Field Investigation Map, MF-585, U. S. Dept. of SOURCE: Interior, Geological Survey, Reston, Virginia DATE: 01/01/74 ABSTRACT: Geologic and index maps, scale 1:500,000, show major faults and their ages. KEYWORDS: Geomorphology geology, maps, neotectonics, submarine canyons California, South Central Region, South Coast Region Map of Cretaceous Turbidite Facies, Point Loma Peninsula AUTHOR(S): Zlotnik, E. In: Geologic Excursions in the Southern California Area, P. L. SOURCE: Abbott, Ed., Dept. of Geological Sciences, San Diego State Univ., San Diego, California, pp. 167-185 DATE: 01/01/79 ABSTRACT: The strata are mapped as four submarine fan facies. The rocks have previously been mapped as the Point Loma and Cabrillo Formations. KEYWORDS: Geomorphology cliff sediment, geology, maps California, San Diego Region, Subregion X, S. Mission Bay Reach Determination of Land Evaluation Changes Using Tidal Data AUTHOR(S): Abreu, Francisco A. T. V. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 124 pages DATE: 09/01/80 ABSTRACT: Thesis concerned with a study of the temporal pattern of vertical land movements at selected Pacific tide stations. KEYWORDS: Coastal Processes, Geomorphology shoreline changes California, Subregion I, Subregion II, Subregion IV

Investigations Related to the Effect of the Proposed Mendocino Thermal Power Plant on the Marine Environment AUTHOR(S): Adams, J. R.; Dole, M. J., Jr.; Miner, R. M.; Mindley, R. D. SOURCE: Pacific Gas and Electric Company, Department of Engineering Research, San Ramon, CA, 571 pages DATE: 08/01/71 ABSTRACT: An investigation related to descripton of environmental conditions. Studies related to meteorology, dye data analysis, and physical oceanalogy were performed. Maps, aerial photographs, and charts included. KEYWORDS: Coastal Processes, Socioeconomics aerial photography, coastal currents, environmental constraints, maps, nearshore currents, tides California, Subregion II, Navarro River Cell The International Symposium on Tsunamis and Tsunami Research, Jointly sponsored by the International Union of Geodesy and Geophysics Committee AUTHOR(S): Adams, William M. SOURCE: East-West Center Press, Honolulu, HI, 513 pages, illustrations DATE: 04/01/70 ABSTRACT: The International Symposium on Tsunamis and Tsunami Research was held in Honolulu, Hawaii, from 7 to 10 October 1969. These pro- ceedings document the scientific findings reported at the Sym- posium. Primary topics were: Seismic Source and Energy Transfer, Tsunami Instrumentation, and Tsunami Propagation and Run-up. KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V City of Marina AUTHOR(S): Aero-Geodetic Corporation Monterey County Department of Public Works, Monterey, CA; Aero-SOURCE: Geodetic Corporation, Santa Clara, CA DATE: 11/28/79 ABSTRACT: Orthophoto map with Topographic contours, scale 1-inch=200 feet. Contour interval of 2 feet, California Lambert Grid-Zone 4. Eight sheets, #1, #3, and #6 are of the coast line. KEYWORDS: Survey aerial photography, maps California, Subregion IV, S. Monterey Bay Cell Nothern California Streams; Remarks by Lt. Colonel Robert H. Allan AUTHOR(S): Allan, Robert H. SOURCE: USACE, San Francisco District, San Francisco, CA, 18 folding

maps, not

published DATE: 04/09/65 ABSTRACT: An explanation of the Corps of Engineers' plan of development for Northern California streams. A minimum plan for flood control from coastal river basins from the Oregon border to San Francisco over to the Sacramento Valley is presented. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., reservoirs, watersheds California, Subregion I, Subregion II, Subregion III Annotated Bibliography of BEB and CERC Publications AUTHOR(S): Allan, Robert H.; Spooner, E. L. SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, Miscellaneous Paper Number M.P. 1-68 DATE: 08/01/68 Not reviewed. ABSTRACT: KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics, Survey beaches, geomorphic processes, longshore transport, shore protection, wave climate, wave transformation California An Oceanographic Study Between the Points of Trinidad Head and Eel River AUTHOR(S): Allen, George H.; Oliphant, Malcolm; Baker, Philip; Lollock, Donald L. SOURCE: California Water Pollution Control Board, Sacramento, CA, Annual Report, 110 pages DATE: 01/01/61 ABSTRACT: A collection of oceanographic data taken between Trinidad Head and the Eel River, from 0-20,000 yards offshore. Data include: physical and chemical properties of overlying waters, physical and chemical properties of benthos, biological properties of benthos. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey environmental constraints, hydrographic surveys California, Subregion I, Eureka Cell Physiographic Diagram of the Upper Carmel Canyon and Point Lobos California AUTHOR(S): Alpha, T. R.; Dingler, J. R.; Jones, D. R. SOURCE: U.S. Geological Survey, Open-File Report 81-440, 1 sheet DATE: 01/01/81 ABSTRACT: This is one in a series of physiographic diagrams. Scale varies according to position on the diagram. The direction of the view is toward the southeast. The large scale allows manmade structures to be recognized. KEYWORDS: Geomorphology, Survey geology, maps, submarine canyons California, Subregion IV, Carmel River Cell

Geophysical Survey, Davenport Area, California AUTHOR(S): Alpine Geophysical Associated, Inc. SOURCE: Pacific Gas and Electric Company, San Francisco, California, 46 leaves, illustrations, folding plates DATE: 02/01/71 ABSTRACT: A continuous seismic reflection profiling and side scan sonar survey covering nearly 300 line miles of the area offshore from Davenport, CA, and extending north to Ano Nuevo, and on the south to the northern limit of Monterey Bay. The marine geophysical survey was a portion of site and subsurface investigations preparatory to the design and possible construction of a nuclear power plant by PG&E on shore near El Jarro Point. KEYWORDS: Geomorphology, Survey geology, hydrographic surveys, neotectonics California, Subregion III, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell Cumalative Index, Shore and Beach AUTHOR(S): American Shore and Beach Preservation Association American Shore and Beach Preservation Association, O'Brien SOURCE: Hall, University of California, Berkeley, CA, Volume I, No. 1 through Volume XXXIII, No. 2 DATE: 12/16/65 ABSTRACT: Topics include Dune Restoration and Stabilization; Shore Structures; Legislation for Protection and Development of the Beach and Shore; Pollution; Erosion; Storms and Hurricanes. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Survey beaches, coastal erosion, coastal structures, geomorphic processes, nearshore currents, sedimentation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Proceedings of the American Shore and Beach Preservation Assoc AUTHOR(S): American Shore and Beach Preservation Association SOURCE: Library of Congress Catalog Number 77-89048, Annual Meeting American Shore and Beach Preservation Association, 179 pages DATE: 10/19/77 ABSTRACT: This paper has three themes: (1) hazards in the shoreline environments and importance of occupancy planning; (2) private and public rights; (3) current criteria applicable by various agencies. KEYWORDS: Coastal Processes, Socioeconomics beaches, El Nino, environmental constraints, institutions/planning/mgmt., population, urbanization California, Subregion I, Subregion II, Subregion IV

Coastal Sediments '77 AUTHOR(S): American Society of Civil Engineers Waterways, Ports, Coastal and Ocean Division of American SOURCE: Society of Civil Engineers, New York, NY, fifth symposium, proceedings, 1133 pages DATE: 11/02/77 ABSTRACT: Primary topics are the functional design of structural and nonstructural solutions to shore protection and inlet stabilization problems. Included is coverage of the fuctional design of coastal structures, sediment transport under waves, and case studies of coastal processes and inlets. KEYWORDS: Coastal Processes coastal structures, littoral sediment, longshore transport, shoreline use, shore protection, tidal inlets California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Seawall Serves as Safeguard Against High-Wave Damage AUTHOR(S): American Society of Civil Enginners SOURCE: American Society of Civil Engineers, New York, NY, Volume 52, No. 5 (May), page 20, photo DATE: 05/01/80 ABSTRACT: Describes the California State Department of Recreation's attempt to reinforce the seawall at Seacliff Beach (Monterey Bay) against storm damage. KEYWORDS: Coastal Processes coastal structures, storm damage, wave transformation California, Subregion IV, Santa Cruz Cell Erosion and Sediment Control Handbook AUTHOR(S): Amimoto, Perry Y. SOURCE: California Department of Conservation, Sacramento, CA, 198 pages (EPA 44013-78-003) DATE: 05/01/78 ABSTRACT: The problem of erosion and its environmental impact. Provides a tool for assuring that development processes have a minimum adverse impact on the quality of California's environment. Definitions, maps, charts, and photographs included. KEYWORDS: Geomorphology, Socioeconomics, Survey environmental constraints, geology, institutions/planning/mgmt., maps, river discharge, sedimentation California, Subregion I, Subregion II, Subregion IV, Subregion V Some Interpretation of Sediment Source and Causes, Pacific Coast Basins in Oregon and California AUTHOR(S): Anderson, Henry W.

SOURCE: Federal Iner-Agency Sedimentation Conference, Jackson, MS, 1963, Proc., Symposium 1--Land Erosion and Control, U.S. Depart- ment of Agriculture, Misc. Pub, 970 pages, 1965 DATE: 01/01/63 ABSTRACT: Discussion of differences in sediment discharge from watersheds and relation to differences in erosion from slopes, channels, and to differences in transport of eroded material. Between and within watersheds, the discharges vary in response to differnces in streamflow, soils, topography, and land use. An evaluation is made of thse factors in the Pacific Coast basin. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics petrology, river-bed sediment, river sediment discharge, sedimentation, watersheds, California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Sediment Sources and Causes, Pacific Coast Basins in Oregon and California AUTHOR(S): Anderson, Henry W.; Wallis, James R. SOURCE: U.S. Department of Agriculture, U.S. Pacific Southwest Forest and Range Experiment Station, Forest Service, review draft not for publication, 17 leaves, available at USACE San Francisco, CA DATE: 01/22/63 ABSTRACT: This paper reports the differences in sediment discharge associated with specific measures of potentials in the Pacific Coast Basins of Western Oregon and California. The potentials are meteorological, topographic, soil erodibility, and land use. KEYWORDS: Geomorphology fires, geology, precipitation, sedimentation, watersheds, watershed sediment California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Major Floods, Poor Land Use Delay, Return of Sedimentation to Normal Rates AUTHOR(S): Anderson, Henry W. SOURCE: Pacific Southwest Forest and Range Experiment Station, Berkeley, CA, Report No. FSRN-PSW-268, 5 pages DATE: 01/01/72 ABSTRACT: Recovery from flood-accelerated sedimentation affects both estimates of long-term average depositon and short-term moni- toring of changes. Years to return to normal for 10 water- sheds in northern California after a major flood

accelerated sediment concentrations were analyzed. Rate of decline was related to both amount of initial acceleration by the flood and differences in watersheds. Years to recovery increased with watershed, area of poor logging, area of steep grassland, and percent of area in sedimentary rock types Cenozoic or younger. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, river discharge, river sediment discharge, sedimentation, urbanization, watersheds, watershed sediment California, Subregion I, Subregion II, Subregion III Economic Regulation and Development Goals. The California Coastal Initiative AUTHOR(S): Anderson, Janell University of California at Davis, Institute of Governmental SOURCE: Affairs, 131 pages DATE: 01/01/74 ABSTRACT: A study of the role of the California legislature in the regulation of business. The focus is an the California Coastal Initiative in 1972 which created the California Coastal Zone Commission. KEYWORDS: Socioeconomics institutions/planning/mgmt. California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Bluff Erosion at Crescent City, California, A Policy Analysis AUTHOR(S): Anderson, Larry SOURCE: University of California, Berkeley, CA, Thesis, 1977 DATE: 05/16/77 ABSTRACT: A discussion of the Corps of Engineers choice for bluff protection. Computes annual bluff erosion rate based on 1924 photos. KEYWORDS: Coastal Processes, Socioeconomics beach nourishment/dredging, cliff sediment, coastal erosion, coastal structures, qeology California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell Sand Budget for Capitola Beach, California AUTHOR(S): Anderson, R. G. SOURCE: U.S. Naval Postgraduate School, Monterey, California, Master's Thesis, 59 pages, Water Resources Abstracts (067676 W74-02718), Minneapolis, MN: Environmental Hydrology Corporation DATE: 03/01/71 ABSTRACT: The beach at Capitola, California has a history of short-term variations about a nominally wide beach. This pattern was interrupted in 1965 when the beach was greatly depleted fol- lowing the construction of Santa Cruz

Harbor. Observed short- term variations in the beach are reflected in the monthly sand budget. KEYWORDS: Coastal Processes coastal erosion, coastal structures, littoral sediment, river sediment discharge California, Subregion IV, Santa Cruz Cell Humboldt Bay, Nuclear Power Plant Survey. March through May 1971 AUTHOR(S): Andrews, Vernon E.; Harton, Thomas R. SOURCE: U.S. Environmental Protection Agency, Western Environmental Research Labaratory, 31 pages, WERLV-1 DATE: 04/01/72 ABSTRACT: A pilot study to evaluate the use of aerial surveillance techniques in tracking and sampling of gaseous effluents from nuclear power plants. Data is useful in measuring peak environmental exposures and in determining effects of local terrain and meteorology on diffusion of the airborne effluent. KEYWORDS: Oceanography & Meteorology, Socioeconomics, Survey environmental constraints, institutions/planning/mgmt., wind California, Subregion I, Eureka Cell Enhancement of Coastal Agriculture AUTHOR(S): Angus McDonald and Associates, Inc. SOURCE: California Coastal Commission and the California Coastal Conservancy, Oakland, CA, 198 pages DATE: 03/01/81 ABSTRACT: A study presenting a method for determining the economic feasibility of agriculture and suggesting a way to enhance agriculture through mixed uses or the combination of supple- mental, non-agricultural uses. Included are two mixed case studies, mixed use guidelines, and an action program of how to regard the conservancy's power to promote the mixed use concept. KEYWORDS: Socioeconomics geology, shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V Coast Off Salinas River, Monterey Bay, California AUTHOR(S): Anonymous Available at University of California, Berkeley, Water SOURCE: Resources Archives DATE: 01/01/56 ABSTRACT: This is a map of the coast off Salinas River, Monterey Bay, California, in 1856. Photocopy positive. Map is 106.5 x 68 cm. scale 1:40000. Soundings are in fathoms. KEYWORDS: Survey maps California, Subregion IV, S. Monterey Bay Cell

Slope of Sea Level Along the Pacific Coast of the United States AUTHOR(S): Anonymous SOURCE: Journal of Geophysical Research, Richmond, VA, Volume 72, No.14 DATE: 07/15/67 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology sea level change California, Oregon, Subregion I, Subregion II, Subregion III, Subregion IV. Subregion V Satellite Test for World Ocean Monitoring AUTHOR(S): Anonymous SOURCE: World Dredging and Marine Construction 14 (6), Irving, CA, 20-22, June 1978, Oceanic Abstracts, Bethesda, MD, (79-00505) DATE: 06/01/78 ABSTRACT: Lockheed Missiles and Space Company, under contract with the NASA office of Space and Terrestrial Applications and the Jet Propulsion Laboratory (JPL), tested Seasat A to monitor surface winds, temperatures, currents, wave ht, ice conditions, ocean topography, and coastal storm activity in the world's oceans. The information has potential applications for port development, harbor and port scheduling, coastal zone protection, search and rescue missions, and fisheries control. Other uses include oil well site selection, warnings of storm conditions threatening platform crews and operations, weather routing of ships, and catch locations and routings for the fishing industry. Seasat Α circles the earth 14 times a day, covering 95% of the global KEYWORDS: Oceanography & Meteorology remote sensing California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Seiches in the Extended Harbor AUTHOR(S): Anonymous SOURCE: USACE, San Francisco District, San Francisco, CA, Only a portion of entire report, 25 pages, figures, appendix DATE: 01/01/85 ABSTRACT: This report discusses seiche prediction theory. Various theo- ries and results are given, in particular, an attempt was made to predict in some detail the seiche conditions in Santa Cruz Harbor. This attempt was made in a study of very limited scope and in the absence of a proven, tractable, realistic theory.

KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Oceanography & Meteorology wave climate, wave transformation California, Subregion IV, Santa Cruz Cell Environmental Studies of Monterey Bay and the Central California Coastal Zone AUTHOR(S): Arnal, Robert E. Moss Landing Marine Laboratories, Moss Landing, CA, Report No. SOURCE: NOAA-72061405, 99 pages DATE: 02/01/72 ABSTRACT: The report gives details on work in progress in plankton studies, hydrography, benthic surveys, fishery productivity, and sand transport in Monterey Bay, California. Also discussed is progress in providing additional education in the marine sciences. KEYWORDS: Coastal Processes, Oceanography & Meteorology littoral sediment, longshore transport California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell A Short Survey of the Environment at the Dumping Site for Santa Cruz Harbor Dredging AUTHOR(S): Arnal, Robert E. SOURCE: California State University at San Jose, Moss Landing Marine Laboratories, Moss Landing, CA, pages 1-18, illustrations, tables, (Technical Publication 72-3) DATE: 08/01/72 ABSTRACT: This is a short survey of the environment at the dumping site for Santa Cruz Harbor dredging. Survey of the environment included local surface currents, bottom topography, sediments at the dredge site, sediments at the disposal site, and rough benthic survey. KEYWORDS: Survey coastal currents, environmental constraints, grain size, mining, sedimentation California, Subregion IV, Santa Cruz Cell Sand Transport Studies in Monterey Bay, California AUTHOR(S): Arnal, Robert E.; Dittmer, Eric; Shumaker, Evelyn SOURCE: Moss Landing Marine Laboratories, California State University at San Jose, Moss Landing, CA, Technical Publication 73-5, Annual Report, Part 5, 71 pages, illustrations, tables, photos DATE: 01/01/73 Three processes are considered; erosion, transportation and ABSTRACT: deposition. These processes are examined successively to determine the components of a preliminary sand budget for Monterey Bay. The budget is based on a duration of 50 to 100 years minimum and up to 3,000 years maximum. Considered is the process of erosion and the supply of sediment to Monterey Bay;

the process of transportation of sediment; and the sediment losses and the process of deposition in Monterey Bay to a depth of 20 fathoms. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics coastal erosion, longshore transport, offshore/onshore transport, river sediment discharge, sedimentation, wind transport California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Photograph of North of the Mouth of Waddell Creek, Looking South Santa Cruz County, California, CA, 1904 AUTHOR(S): Arnold, R. SOURCE: U.S. Geological Survey Photographic Library, Denver, Colorado, Photograph number 12 in Subject Album Volume 51, page 14 DATE: 01/01/04 ABSTRACT: A view of the monoclinical structure in Oligocene-Miocene shales just north of the mouth of Waddell Creek, looking south. Horses and buggy on the beach in the photograph's foreground can be used for scale. KEYWORDS: Survey shoreline changes California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell Photograph Taken 2.5 miles North of Pigeon Point, San Mateo County, California, May 29, 1905 AUTHOR(S): Arnold, R. SOURCE: U.S. Geological Survey Photographic Library Denver, Colorado, Photograph (no. 109) DATE: 05/29/05 ABSTRACT: A view of thin-bedded sandstones in the Pescadero series, 2-1/2miles north of Pigeon Point, San Mateo County, California. A rocky beach is in the foreground of the photograph. The photo- graph was taken at 10 A.M. on May 29, 1905, a partly hazy day. KEYWORDS: Survey beaches, shoreline changes California, Subregion III, S. Half Moon Bay Reach-A Photograph Taken 2.5 miles North of Pigeon Point, San Mateo County, California May 29, 1905 AUTHOR(S): Arnold, R. SOURCE: U.S. Geological Survey Photographic Library, Denver, Colorado, Photograph (no. 110) DATE: 05/29/05 ABSTRACT: A view, looking northwest, of steeply dipping conglomerate of the Chico Formation on the coast 2-1/2 miles north of Pigeon Point, San Mateo County, California. The conglomerate forms a wave-cut platform. KEYWORDS: Survey shoreline changes California, Subregion III, S. Half Moon Bay Reach-A

Photograph of Pigeon Point Light Station, Looking Northwest, San Mateo County, California, May 30, 1905 AUTHOR(S): Arnold, R. SOURCE: U.S. Geological Survey Photographic Library Denver, Colorado, Photograph (no. 112) DATE: 05/30/05 ABSTRACT: A view of Pigeon Point light station, looking northwest, showing the lowest marine terrace and a conglomerate promontory at the shoreline. This photograph was taken at 8:30 A.M. on May 30, 1905. The day was partly hazv. KEYWORDS: Survey shoreline changes California, Subregion III, S. Half Moon Bay Reach-A Photograph Taken 1 Mile East of Point Ano Nuevo, San Mateo County, California, May 30, 1905 AUTHOR(S): Arnold, R. SOURCE: U.S. Geological Survey Photographic Library, Denver, Colorado, Photograph (no. 117) DATE: 05/30/05 ABSTRACT: A view looking east from the top of the 40-foot marine terrace. 1 mile east of Point Ano Nuevo. Large scale cusps are apparent on the shoreface of the beach below the cliffs. This photograph was published in 1909 as figure 7 in U.S. Geological Survey Folio 163. KEYWORDS: Survey beaches, shoreline changes California, Subregion III, S. Half Moon Bay Reach-A Photograph of the Mouth of Waddell Creek, Showing Sand Dune, Santa Cruz County, California, May 31, 1905 AUTHOR(S): Arnold, R. SOURCE: U.S. Geological Survey Photograph Library, Denver, Colorado, Photograph no. 118 in Subject Album, V. 26, page 64 DATE: 05/31/05 ABSTRACT: A view looking southeast across the mouth of Waddell Creek, Santa Cruz County, showing a sand dune "climbing" up the terr- ace. This photograph was taken at 12:30 P.M. on May 31, 1905. KEYWORDS: Survey beaches, dunes, shoreline changes California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell Photograph of San Vicente Creek, Santa Cruz County, California, May 31, 1905 AUTHOR(S): Arnold, R. SOURCE: U.S. Geological Survey Photographic Library Denver, Colorado, Photograph no. 120 in Subject Album, v. 91, page 7

DATE: 05/31/05 ABSTRACT: A view looking southwest along the east side of the mouth of San Vincente Creek, showing a small ravine on the left which has been "robbed" by the creek. This photograph was taken at 4:00 P.M. on May 31, 1905. KEYWORDS: Survey shoreline changes California, Subregion III, S. Half Moon Bay Reach-A Photograph of a Natural Bridge in the Monterey Shale, Santa Cruz County, California, 1909 AUTHOR(S): Arnold, R. SOURCE: U.S. Geological Survey Photographic Library, Denver, Colorado, Photograph no. 16 in general collection 3201 DATE: 01/01/09 ABSTRACT: A view three miles west of Santa Cruz, looking seaward through a natural bridge in the Monterey Shale. The bridge is overlain by 15 feet of Quaternary (younger than 2 million years old) deposits which form the surface of the lowest marine terrace. A horse and buggy is on top of the bridge and can be used for scale. This photograph was published as figure 6 in U.S. Geological Survey Folio 163 in 1909. KEYWORDS: Survey shoreline changes California, Subregion IV, S. Half Moon Bay Reach-B Flood! December 1964 - January 1965 AUTHOR(S): Arvola, William A. SOURCE: California Department of Water Resources, Sacramento, CA, Bulletin No. 161, 48 pages, plates and figures DATE: 01/01/65 A report detailing some of the factors contributing to the ABSTRACT: floods of December 1964 - January 1965, including precipitation records runoff events, evaluation of protective structures, and flood damage estimates. KEYWORDS: Hydrology & Hydraulics, Socioeconomics precipitation, property value/land use, stream gaging, storm damage, watersheds California, Subregion I, Subregion II, Subregion III Ocean Coastline Study: Bay Area Regional Planning Program AUTHOR(S): Association of Bay Area Governments SOURCE: Association of Bay Area Governments, Oakland, CA, Supplemental Report 15-5, 125 pages, maps, tables DATE: 06/01/70 ABSTRACT: This study describes the physical characteristics, land and water uses, existing and proposed governmental plans and policies, and the problems

and issues that exist along a 300- mile stretch of California's ocean coastline. KEYWORDS: Geomorphology, Oceanography & Meteorology, Socioeconomics environmental constraints, geology, institutions/planning/mgmt., property value/land use, shoreline use, urbanization California, Subregion II, Subregion III, Subregion IV Late Quaternary Depositional History, Holocene Sea-Level Changes and Vertical Crustal Movement, Southern San Francisco Bay, California AUTHOR(S): Atwater, B. F.; Hedel, C. W.; Helly, E. J. SOURCE: U.S. Geological Survey Professional Paper 1014, pages 15 DATE: 01/01/77 ABSTRACT: Analysis of sediments collected for bridge foundation studies in southern San Francisco Bay, California. The evolution of the present-day bay can be reconstructed from the elevations and C14 ages of plant remains from the 13 core samples collected. KEYWORDS: Coastal Processes, Geomorphology neotectonics, sea level change, sedimentation California, Subregion III, Bolinas Bay Cell, San Francisco Cell Central San Mateo County California: Land-Use Controls Arising from Erosion of Seacliffs, Landslidings and Fault Movement AUTHOR(S): Atwater, B. F. SOURCE: Robinson, G. D., and Spieker, A. M. eds., "Nature to be Commanded..." earth science maps applied to land and water management, USGS Professional Paper 950, pages 11-19 DATE: 01/01/78 ABSTRACT: Article appearing in a professional paper illustrating the use of maps in land and water management. Focuses on the area from Half Moon Bay to Montara. Five color, small scale (about 1:125,000) maps present information about the coastline includ- ing general geology and erosion characteristics. Planning maps reflecting county regulations for bluff-top development and maximum residential density allowed by San Mateo County are also included. KEYWORDS: Geomorphology, Socioeconomics, Survey cliff sediment, coastal erosion, California, Subregion III, S. San Francisco Reach, Half Moon Bay Cell Functional Design of a Small Craft Harbor and Recreational Facilities on Limantour Spit AUTHOR(S): Ayala, Luis; Rahman, M. S.; Safaie, Bijan SOURCE: University of California, Berkeley, CA, unpublished student paper, 81 pages and maps, available at University of California, Berkeley, Water Resources Archives

DATE: 03/01/74 ABSTRACT: A preliminary study of the design and construction of a small craft harbor and a small condominium community in Drakes Bay. The report includes: design details for the harbor entrance and jetty construction, shore protection structures and inner harbor moorings, bulkheads and decking. Also included is an Environ- mental Impact Statement. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, environmental constraints, shore protection, tidal inlets California, Subregion III, Drakes Bay Cell, Notice of Earthquake Waves on the Western Coast of the United States on the 23rd and 25th of December 1854 AUTHOR(S): Bache, A. D. SOURCE: The American Journal of Science, New Haven, CT: Yale University, Second Series, Volume 21, pages 37-43, figures DATE: 05/01/56 An account of earthquake generated waves in the San ABSTRACT: Francisco, San Diego, and Astoria areas. Also describes related events in Simoda, and gives widely varing accounts from the New York Herald. KEYWORDS: Coastal Processes tides, tsunamis, wave climate California, Subregion III, San Francisco Cell Geology and Ground-Water Features of the Smith River Plain, Del Norte County, California AUTHOR(S): Back, W. SOURCE: U.S. Geological Survey, Water-Supply Paper 1254, pages 76 DATE: 01/01/57 ABSTRACT: Geological information in this report is presented in a 1:62,500 scale color geologic map. Included in the report is preci-pitation information with Crescent City summarized in a bar graph. KEYWORDS: Geomorphology, Oceanography & Meteorology cliff sediment, geology, maps, precipitation California, Subregion I, Smith River Cell, S. Smith River Reach California's Disappearing Coast: A Legislative Challenge AUTHOR(S): Bailey, Gilbert E.; Thayer, Paul S. SOURCE: University of California, Berkeley, Institute of Governmental Studies, 99 pages, illustrations, photos DATE: 01/01/71 ABSTRACT: This book focuses on the California Coastline as an environmental resource and the challenge to save or lose it. Competing forces, nuclear future,

the highway lobby, the oil lobby, government action, and legislative efforts are discussed. KEYWORDS: Socioeconomics institutions/planning/mgmt., property value/land use, shoreline use, urbanization California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V U.S. Navy Activities in Ocean Wave Measurement and Prediction AUTHOR(S): Bales, S. L.; Neuschafer, G. F. SOURCE: David W. Taylor Naval Ship Reserve and Dev. Center, Bethesda, MD. 20084, Proceedings Oceans '83, Effective use of the Sea: An Update. San Francisco, CA, August 29-September 1, 1983. Vol. 1 DATE: 08/29/83 ABSTRACT: The U.S. Navy is involved in a program to provide new technology for ship design. A major focus of the program is to develop procedures for better quantification of the wind/wave environ- ment. Central to this effort are directional wave hindcasts developed at Fleet Numerical Oceanography Center (FNOC) in Monterey, California. Analysis of these hindcasts has produced new sea state occurrence charts for the North Atlantic and North Pacific Oceans. KEYWORDS: Oceanography & Meteorology wave climate, wind California, Subregion I, Subregion II, Feasibility Report for the Design, Construction and Operation of a Small Boat Marina and Condominium Community on Limantour Spit & within Drakes Estero AUTHOR(S): Balleraud, Pierre; Chou, Shain-Jiun; Leslie, Kenneth SOURCE: University of California, Berkeley, unpublished student paper, various pagings, available at University of California, Berkeley Water Resources Archives DATE: 12/01/79 ABSTRACT: A theoretical development project for the Drake's Estero-Estero De Limantour Estuary. The report describes the planned construction, an evaluation of the environmental influences of the construction, and site factors including geology, topography, seismology, tides, beach profile, wind and wave climate, currents, meteorology, and other design considerations. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics beaches, coastal structures, California, Subregion III, Drakes Bay Cell

Geophysics Applied to Geotechnical Problems in a Marine Environ- ment: A Case

Study - Monterey Bay AUTHOR(S): Barnes, B. B. SOURCE: Marine Minerals Technology Center, Tiburon, CA, No. AA, 279 pages, (AD-763-811) DATE: 06/01/73 ABSTRACT: Geophysical systems consisting of electrical and acoustical tools were developed and applied along with special mapping techniques to obtain geotechnical data in Monterey Bay, Calif- ornia. Objective of the field excercise was to try and relate geophysical measurements to the mass physical properties of sea floor sediments. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Survey geomorphic processes, grain size, hydrographic surveys, maps, sedimentation California, Subregion IV, Santa Cruz Cell, Humboldt Bay, California - A Literature Survey AUTHOR(S): Barnes, Clifford A.; Barder, Richard G.; Mc Lellan, P. SOURCE: University of Washington, Department of Oceanography, Pullman, WA, 144 pages DATE: 07/01/55 ABSTRACT: A literature survey of publications concerned with Humboldt Bav. including: physical geography, cultural geography, preci- pitation, temperature, wind and weather, hydrology, regional geology, seismology, sedimentation, shoreline changes, hydro- graphy, physical oceanography, tides, currents, waves, tsunamis, marine biology. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey hydrographic surveys, sedimentation, tidal inlets, tides, wave climate, wind California, Subregion I, Eureka Cell Monterey Bay Bibliography AUTHOR(S): Baron, Doris Moss Landing Marine Laboratories, Moss Landing, CA, 259 pages, SOURCE: (Technical Publication 71-1) DATE: 01/01/71 ABSTRACT: The primary geographical area covered is the central California Coast from Morro Bay to Tomales Bay. Include is the bordering land areas in addition to the ocean and bays. The document is a partial, provisional edition, organized by subject to facilitate its use in the absence of extensive cross-indexing. It covers geology, petrology, geography, hydrology, oceanography, meteorology, coastal engineering, marine biology, botany, zoology, fisheries and fish culture, geomorphology, recreation, and history. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics,

Oceanography & Meteorology, Socioeconomics beaches, climatology, geology, geomorphic processes, longshore transport, petrology California, Subregion II, Subregion III, Subregion IV, Subregion V Monterey Bay Bibliography: Supplement Number One AUTHOR(S): Baron, Doris SOURCE: Moss Landing Marine Laboratories, Moss Landing, CA, Report No. TP-72-8, CASUS-MLML-TP-72-8, NOAA-73012427, 103 pages DATE: 01/01/72 ABSTRACT: Citations dealing with the Central California Coast from Morro Bay to Tomales Bay including the bordering land areas in addition to the ocean bays, are listed. Citations are grouped by subject and alphabetized by author under each subject area. An author index is also listed. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics beaches, climatology, geology, geomorphic processes, longshore transport, petrology California, Subregion II, Subregion III, Subregion IV, Subregion V Effect of Seismic Sea Wave on California Coast AUTHOR(S): Bascom, Willard N. SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 22 leaves, photos, HE-116-204 DATE: 04/16/46 ABSTRACT: On April 1, 1946 a submarine earthquake occured 65 nautical miles south of Unimak Island in the Aleutians. This disturbance caused a seismic sea wave which resulted in disaster conditions at Hilo Bay in the Hawaiian Tsland and various points in the Aleutians, and did minor damage along the western coast of the United States. University of California researchers investi- gated the arrival of the wave. They visited numerous points on the California coast from Monterey to Fort Bragg and talked to many persons who had seen the wave. A particular effort was made to get data on the time of arrival, period, height, and total variation in water level. KEYWORDS: Coastal Processes, Oceanography & Meteorology, storm surge, storm waves, tides, tsunamis California, Subregion I, Subregion II, Subregion IV, Subregion V Report of Field Studies at Monterey, April 20, 1946 to August 1 1946 AUTHOR(S): Bascom, Willard N. SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 1 volume (unpaged), illustrations, folding plates DATE: 10/01/46

ABSTRACT: This report covers the activities of a field party from April 20, 1946 to August 1, 1946. The work included surf and wave forecasts, profiles, photography, sand sampling, water table profiles, contour maps, elevation checks, and littoral current measurements. KEYWORDS: Coastal Processes, Survey aerial photography, beaches, grain size, maps, wave climate, wind transport California, Subregion IV, Subregion V, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell, Installation of Wave Recorder at Point Sur AUTHOR(S): Bascom, Willard N. SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 5 leaves, photos, HE-116-242 DATE: 04/15/47 ABSTRACT: A diary of the work done at Pt. Sur. to install a deep water, pressure type shore recording wave meter. KEYWORDS: Coastal Processes, Survey aerial photography, wave climate, wave transformation California, Subregion V, Point Sur Cell Beach Surveys at Moss Landing, California, June 6, 1946 to March 31, 1947. AUTHOR(S): Bascom, Willard N. University of California, Berkeley, Department of Engineering, SOURCE: Mechanics Laboratory, 4 leaves, illustrations, photos, folding plates, HF-116-243 DATE: 04/25/47 ABSTRACT: This is an investigation at Moss Landing of two ranges midway between the north jetty and the mouth of Elkhorn Slough and three ranges about 1/2 mile south of the wharf. The surveys were related to the construction of new jetties and the beach was profiled three times in order to try to reach some con- clusion about the changes in sand profile due to the jetty and related construction. Photos of construction and wave effect were taken. KEYWORDS: Coastal Processes, Survey aerial photography, beach profiles, California, Subregion IV, S. Monterey Bay Cell A Memorandum on the Feasibility of Pigeon Point as a Location for Instruments AUTHOR(S): Bascom, Willard N. SOURCE: University of California, Berkeley, Department of Engineering Fluid Mechanics Laboratory, 1 leaf, illustrations, (HEL-116-278) DATE: 02/05/48 ABSTRACT: This is a memorandum on the feasibility of Pigeon Point as a location for instruments. It was concluded that only a pressure recorder would

be recommended (not the wave current direction recorder) and a current velocity recorder connected to shore by 10 strand submarine cable. KEYWORDS: Coastal Processes, Survey wave climate, wave transformation California, Subregion III, S. Half Moon Bay Reach-A Shoreline Atlas of Pacific Coast of United States AUTHOR(S): Bascom, Willard N. SOURCE: University of California, Berkeley, Institute of Engineering Research, Volume I, 21 pages of text, photos, Volumes II through V include photos only. series 14-Issue I DATE: 01/01/50 The University staff has been collecting data on and ABSTRACT: photographs of the coast since 1944 under various research contracts; this volume was compiled in order to make this information available under one cover. It is composed of two sections. Section one deals with the general influences affecting the shoreline. Specifically, tides, waves, currents, shore profiles, weather, tidal prisms, sand size and its variations. Section Two contains charts and photographs. KEYWORDS: Coastal Processes, Survey aerial photography, coastal currents, grain size, shoreline changes, tides, wave climate California, Subregion I, Subregion II, Subregion IV, Subregion V The Relationship Between Sand Size and Beach Face Slope AUTHOR(S): Bascom, Willard N. Transactions, American Geophysics Union, Washington, D.C., SOURCE: Volume 32, Number 6, pages 861-874 DATE: 01/01/51 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes beaches, beach profiles, grain size California Bibliography Update on the California Current System and Related Mesoscale Ocean Modeling AUTHOR(S): Batteen, M. L. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Report Number NPS 68-84-017, 61 pages DATE: 10/01/84 ABSTRACT: This bibliography has been prepared for use in the Ocean Prediction Through Observation, Modeling and Analysis (OPTOMA) program. It updates the

1980 publication: Bibliography for the Coastal Circulation of the Eastern North Pacific. In addition, mesoscale ocean modeling references related to the California Current System have been included. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, hydrographic surveys, storm waves, wave climate, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Environmental Assessment, West Coast Deep Water Port Study (211B01577) AUTHOR(S): Battelle Pacific Northwest Laboratories SOURCE: USACE, San Francisco District, By Battelle Pacific Northwest Laboratories, Richland, Washington, Under Contract Number DACW07-73-C-0063, Various Pagings DATE: 06/01/73 Existing environmental conditions were summarized for 11 ABSTRACT: potential deepwater port sites on the West Coast of the United States. The environmental analyses considered the impact of oil tanker operation (including oil spills), the construction and maintenance of navigation channels, and the construction and operation of terminals, pipelines, refineries and other support facilities on air quality, water quality, flora and fauna, aesthetics, recreation, and archeological and historical values. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics climatology, coastal structures, environmental constraints, longshore current, population, tides California, Subregion III, Subregion IV, San Francisco Cell, Half Moon Bay Cell, S. Monterey Bay Cell Ocean Coastline Study AUTHOR(S): Bay Area Regional Planning Program SOURCE: Association of Bay Area Governments, Oakland, CA, Supplemental Report 15-5, 125 pages DATE: 06/01/70 ABSTRACT: This study describes the physical characteristics, land and water uses, existing and proposed governmental plans and policies, and the problems and issues that exist along a 300- mile stretch of California's coastline. Includes charts and maps. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., population, property value/land use, urbanization, wind California, Subregion II, Subregion IV, Subregion VIII

Report on Eel River Investigations, California AUTHOR(S): Bechtel Corporation SOURCE: Bechtel Corporation, San Francisco, CA, various pagings, maps and figures DATE: 12/01/59 ABSTRACT: The scope of the investigations consist of a preliminary study of the physical feasibility and estimated cost of damsites on the Eel River. Report is based on a review of available exist- ing information and engineering-geologic examination of sites and other pertinent areas, not including subsurface investiga- tions. This includes consideration of three damsites on the Eel River at Sequoia, Bell Springs, and Willis Ridge as described in bulletin No. 3 of the State Department of Water Resources, and possible alternative sites. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics geology, institutions/planning/mgmt., population, California, Subregion I, Subregion II, Subregion III Geology of the Marin headlands AUTHOR(S): Bedrossian, Trinda L. California Geology, (A publication of California Division of SOURCE: Mines and Geology, Sacramento, CA), April 1974, Volume 27, No.4, pages 75-86, photos, maps, diagrams DATE: 04/01/74 ABSTRACT: This article describes the geologic formation of the Marin Headlands. This area which encompasses Marin Headlands State Park, Fort Baker, Fort Barry, Fort Cronkhite, and some Coast Guard and privately owned land became a major component of the Golden Gate National Recreational area in 1972. The area is essentially undeveloped with steep sea cliffs, commonly sculptured by landslides that have left near vertical scarps along the Pacific Coast and Golden Gate. KEYWORDS: Geomorphology geology, littoral sediment, petrology California, Subregion III, Bolinas Bay Cell Watersheds Mapping in Northern California AUTHOR(S): Bedrossian, Trinda L. California Geology, June 1983, Volume 36, No. 7, California SOURCE: Division of Mines and Geology, Sacramento, CA, pages 140-147 DATE: 06/01/83 ABSTRACT: This is part of a pilot study to provide regional scale geologic mapping of selected north coast watersheds. The maps depict geology and geomorphic features related to land sliding and slopes greater than 70 percent. The article also describes land slide terminology.

KEYWORDS: Geomorphology geology, geomorphic processes, maps California, Subregion I, Subregion II, Smith River Cell, S. Smith River Reach, Klamath River Cell, S. Klamath River Reach, Eureka Cell California's Coastal Zone AUTHOR(S): Bendix Broadberry Associates; Copley International Corporation SOURCE: California Advisory Commission on Marine and Coastal Resources and the Interagency Council on Ocean Resources, Sacramento, CA DATE: 09/01/68 ABSTRACT: A general overview of California's Coastal Zone including information on population recreation, growth, tourism, mineral resources, resources in general, and jurisdictional conflict. Includes maps. KEYWORDS: Socioeconomics beaches, deltas, geology, maps, population, property value/land use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Depositional History and Fault-Related Studies, Bolinas Lagoon, California AUTHOR(S): Bergquist, J. R. SOURCE: U.S. Geological Survey Open-File Report 78-802, 164 pages DATE: 01/01/78 ABSTRACT: This report investigates the depositional system of Bolinas Lagoon with an emphasis on the effects of 1906 earthquake and logging in the mid-ninteenth century on the lagoon. Topographic surveys taken from 1854 to 1950 and previously unpublished photographs taken from 1906 to 1977 are used to elucidate the changing morphologies of the lagoon and bluffs near the lagoon. Seismic profiling and coring were used to determine the low-res- olution, long-time-frame depositional history. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Survey coastal erosion, estuarine sediment storage, maps, neotectonics, sedimentation, shoreline changes California, Subregion III, Bolinas Bay Cell California Current Eddy Formation: Ship, Air, and Satellite Results AUTHOR(S): Bernstein, Robert L.; Breaker, Larry; Whritner, Robert SOURCE: Science, Washington, D.C.: American Association for the Advancement of Science, Volume 195, No. 4276 (28 Jan), 1977, pages 353-359, photos, maps DATE: 01/28/77 ABSTRACT: The California Current system has been repeatedly surveyed hydrographically by research vessels over the last 27 years. The time and space resolution of the repeated surveys, by themselves, usually has not been sufficient for the stages of evolution of a meander to be followed in any detail. Satellite- borne infrared scanners of sufficient sensitivity now

produce high-quality imagery of sea-surface temperature gradients associated with these meanders. The time and space resolution of this imagery, when combined with concurrent hydrographic KEYWORDS: Oceanography & Meteorology, Survey coastal currents, remote sensing California, Subregion I, Subregion II, Subregion IV The Taraval Vertical Sea Wall AUTHOR(S): Berrigan, Paul D. SOURCE: Shore and Beach, American Shore & Beach Preservation Association O'Brien Hall, University of California, Berkeley, CA, Vol. 53, No. 1, January 1985 DATE: 01/01/85 ABSTRACT: Description of Taraval tunnel entrance at Ocean Beach (San Francisco). Includes: comparative beach profiles for 1978 and 1983 along portions of Ocean Beach above MHHW. Towill Inc. performed beach surveys for City of San Francisco in 1978 and 1983. KEYWORDS: Coastal Processes, Survey beach profiles, coastal structures, shoreline changes California, Subregion III, San Francisco Cell Seasonal Beach Changes at the Taraval Seawall AUTHOR(S): Berrigan, Paul D. SOURCE: Shore and Beach, American Shore & Beach Preservation Association O'Brien Hall, University of California, Berkeley, CA, Volume 3, No. 2, April 1985, pages 9-15 DATE: 04/01/85 ABSTRACT: The objective of this article is to show how the Taraval seawall (San Francisco) has performed during the last 7 years in preserving 662 feet of Ocean Beach. KEYWORDS: Coastal Processes beaches, coastal erosion, coastal structures, sand entrapment, shore protection, wave climate California, Subregion III, San Francisco Cell Preliminary Feasibility Report of a Fishing Pier Near San Francisco's Southwest Ocean Outfall AUTHOR(S): Bertolotti, A.; Johnson, T. I.; Salvalaggio, M. A. University of California, Berkeley, unpublished student paper, SOURCE: unpaged, available at University of California, Berkeley, CA, Water Resources Archives DATE: 05/01/84 ABSTRACT: A feasibility study for the construction of a Fishing Pier at the San Francisco southwest ocean outfall. Includes evaluation of the following

parameters: sediments, currents, winds, bathy- metry, seismicity, tsunamis, wave climate, design criteria and operational considerations. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, hydrographic surveys, littoral sediment, tsunamis, wave climate, wind California, Subregion III, San Francisco Cell, S. San Francisco Reach Storms Causing Harbor and Shoreline Damage Through Wind and Waves Near Monterey, California AUTHOR(S): Bixby, Harry L., Jr. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 186 pages, (AD-619505) DATE: 01/01/62 ABSTRACT: To gain information about storms that might lead to forecasting techniques, a complete list of such storms for the 50-year period from 1910 to 1960 was made through a search of local newspaper files. The most significant storms, their frequency of occurrence, the synoptic situations with which they were associated, and the hindcasted sea condition that accompanied them are described. Wave hindcasts were made to facilitate comparisons of storm intensities. These comparisons, in terms of the intensity of wave conditions, were made using a quantity called Damage Potential, a function of the size and duration of the storm waves. Synoptic situations with which these storms KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, storms/floods, storm surge, storm waves, wave climate, wind California, Subregion IV, S. Monterey Bay Cell, Carmel River Cell Monterey Bay Study AUTHOR(S): Bizzell, Robert; Wade, Lewis C. SOURCE: U.S. National Aeronautics and Space Administration, Washington, D.C., Scientific and Technical Information Office, 33 pages, illustrations, tables, color photos DATE: 01/01/75 ABSTRACT: The first ERTS-1 multispectral scanner (MSS) data to be received at NASA's Lyndon B. Johnson Space Center (JSC) was for Monterey Bay, CA. This data was used for cursory evaluation of the utility of satellite-acquired multispectral data in terms of discipline oriented applications and for checkout of the JSC earth resources computer-aided and image-interpretive data processing facilities. KEYWORDS: Survey aerial photography, remote sensing California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell

A Drift Card Study in Monterey Bay, California, September 1971 to April 1973 AUTHOR(S): Blaskovich, David D. SOURCE: Moss Landing Marine Laboratories, California State University at San Jose, Moss Landing, CA, 79 pages, illustrations, tables, Technical Publication 73-4, not published DATE: 04/01/73 ABSTRACT: Drift cards were released in Monterey Bay, California, to detect seasonal variations in the California current system, and seasonal and diurnal wind variations in the immediate vicinity of the bay. About 23% of the cards were recovered. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, longshore current, nearshore currents, wind, wind transport California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Peak Flow, Volume, and Frequency of the January 1982 flood, Santa Cruz Mountains and Vicinity, California AUTHOR(S): Blodgett, J. C.; Poeschel, K. R. SOURCE: U.S. Geological Survey Open-File Report 84-583, 22 pages DATE: 01/01/84 ABSTRACT: Data for 5 precipitation stations and 37 streamflow sites located in the Santa Cruz Mountains were used to compare the January 1982 and December 1955 floods. The study area included basins with major flooding and adjacent basins both east and west of the Santa Cruz Mountains divide and south of the major areas of flooding. Recurrence intervals of the precipitation and peak flow and the effects of prestorm conditions, such as antecedent precipitation, on runoff were evaluated. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging, watersheds California, Subregion IV, Santa Cruz Cell The Coastal Zone: Problems, Priorities and People AUTHOR(S): Bodovitz, Joseph E. SOURCE: California Coastal Zone Conservation Commission, Oakland, CA, 11 pages DATE: 06/13/73 ABSTRACT: A conference paper describing how certain provisions of the California Coastal Zone Conservation Act of 1972 can be applied to Coastal Zone Management in other areas. KEYWORDS: Socioeconomics institutions/planning/mgmt. California, Subregion I, Subregion II, Subregion IV, Subregion V

Hydrographic Data from the Area of the Monterey Submarine Canyon, 1951-1955 AUTHOR(S): Bolin, Rolf L. SOURCE: Hopkins Marine Station, Monterey, CA DATE: 06/30/64 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology, Survey hydrographic surveys, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell The Climate of Mendocino County AUTHOR(S): Books, William H.; Bearden, Bruce E. SOURCE: California Climatologist, Assistant Climatologist, San Francisco, CA DATE: 01/01/63 ABSTRACT: This report includes average monthly & seasonal precipitation probability, & Surface Wind Summary of Point Arena & Fort Bragg. KEYWORDS: Oceanography & Meteorology climatology, precipitation, wind California, Subregion II, S. Ten Mile River Reach Empirical Probability Distributions for Astronomical Water Height AUTHOR(S): Borcherdt, R. D.; Borgman, L. E. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Technical Report HEL-16-6, 24 pages, tables, diagrams DATE: 07/01/70 ABSTRACT: The hourly astronomical water height was calculated for Crescent City, California and San Francisco, California. Empirical probability distributions calculated from 369 day intervals of these data show characteristics similar to those of a beta distribution. The empirical probability distribution derived for the tsunami of May 22, 1960 is also included. The computer programs for the calculations are described. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey tides, tsunamis California, Subregion I, Subregion III, S. Smith River Reach, Klamath River Cell, San Francisco Cell The Transport Characteristics of Dredged Material Disposal at the Interim Designated Humboldt Ocean, Disposal Site (SF-3) AUTHOR(S): Borgeld, Jeffry C.; Dequegnat, John E. SOURCE: USACE, San Francisco, District, San Francisco, CA, unpublished paper, December 1983 DATE: 12/04/83 ABSTRACT: The Humboldt Ocean Disposal Site (SF-3) is located offshore, to the south of the entrance jetties at the mouth of Humboldt Bay. The disposal site is by designation 500 yards (450 meters) in diameter centered at 40 degrees 45'

44"N and 124 degrees 15' 42" W in approximately 60-70 feet (18-21 meters) of water. The purpose of this study was to investigate the mounding potential and transport characteristics of material disposed of at the site. This study uses previously existing oceanographic data to theoretically predict the behavior of dredge sediment at the designated disposal site. These theoretical calculations are then tested by the direct examination of the characteristics KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Survey coastal currents, grain size, hydrographic surveys, littoral sediment, nearshore currents, wave climate California, Subregion I, Eureka Cell Updated Annotated Bibliography and Assessment of Pertinent Data for Monterey Bay, Task I AUTHOR(S): Boston, Noel E.; Denner, Warren W. SOURCE: Environmental Research Associates, San Francisco, CA DATE: 08/15/72 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Survey climatology, geology, littoral sediment, nearshore currents, wave climate California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell The Nearshore Physical Oceanographic Environment of the Pacific Northwest Coast AUTHOR(S): Bourke, Robert H.; Glenne, B.; Adams, B. W. Oregon State University, Corvallis, OR, Department of SOURCE: Oceanography, 127 Pages DATE: 02/01/71 The oceanographic, meteorologic, and geologic environment of ABSTRACT: the near-shore region of the Pacific Northwest Coast is described. Specifically, compilation and summary are presented of the available data from the coastline to ten nautical miles offshore extending from Cape Flattery, Washington, to Cape Mendocino, California. The study area consists of broad sandy beaches set between protruding rocky headlands. The survey included biological and chemical oceanographic investigations as well as physical. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology beaches, coastal currents, geology, sedimentation, wave climate, wind California, Oregon, Subregion I Regulating Coastal Land Use: The Legal Issues AUTHOR(S): Bowden, Gerald

SOURCE: Prepared for California Coastal Zone Conservation Commission through the University of California Sea Grant Program, La Jolla, CA, 23 Pages DATE: 01/01/75 ABSTRACT: Purpose of the paper is to outline legal limits within which the Coastal Commission must fashion the regulatory component of its coastal plan. The paper concerns the legal definitions of property and the compensation necessary when the government takes private property. KEYWORDS: Socioeconomics institutions/planning/mgmt., property value/land use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Coastal Plan Implementation Through Property Tax Incentives AUTHOR(S): Bowden, Gerald SOURCE: Prepared for the California Coastal Zone Conservation Commission through the University of California Sea Grant Program, La Jolla, CA, 19 pages DATE: 03/14/75 ABSTRACT: Focus of this paper is the California Land Conservation Act, also known as Williamson Act, and a companion provision, article 28 of the state constitution. It outlines the problem which spawned the Williamson Act, describes its basic elements, and suggests ways to implement a coastal plan. KEYWORDS: Socioeconomics property value/land use California, Subregion I, Subregion II, Subregion IV, Subregion V Coastal Plan Implementation through Acquisition Techniques AUTHOR(S): Bowden, Gerald Prepared for the California Coastal Zone Conservation SOURCE: Commission through the University of California Sea Grant Program, La Jolla, CA, 17 pages DATE: 03/14/75 This is an introduction to the ways in which public rights to ABSTRACT: private land are acquired. It is in 4 parts (1) how government can secure rights in land, (2) divisibility of property rights, (3) selecting the property interest & (4) problems of aquisition. KEYWORDS: Socioeconomics institutions/planning/mgmt., property value/land use California, Subregion I, Subregion II, Subregion IV, Subregion V Fog and Wind Regimes of the Eureka-Arcata Coastal Region of Northern California AUTHOR(S): Bower, Carl A., Jr.; Rengers, Edward C. SOURCE: Dugway Proving Ground, Utah, Report No. DPG-FR-M600P, 149 pages DATE: 05/01/74

ABSTRACT: This compilation is presented as background material for operational planning purposes for activities operating in this highly foggy region. Topics include a general description of the physiography, climatology, and oceanography; offshore wind and fog climatology; onshore climatological information on fog-occurence wind, and visibility computer simulation of wind fields and trajectories during low visibility conditions; and physical characteriscs of coastal fogs. KEYWORDS: Oceanography & Meteorology climatology, precipitation, storms/floods, wind California, Subregion I, Eureka Cell Preliminary Map of Landslide Deposits in San Mateo County, California AUTHOR(S): Brabb, E. E.; Pampeyan, E. H. SOURCE: U.S. Geological Survey Miscellaneous Field Studies Map MF-334, scale 1:62,500, 1 sheet DATE: 01/01/72 ABSTRACT: A single sheet, 1:62,500 scale map of landslides larger than 50 feet in maximum dimension. Direction of slumping is shown for about half of the slides. The largest slide along the coast is near Pt. San Pedro in the Devils Slide area. KEYWORDS: Geomorphology, Survey coastal erosion, geology, geomorphic processes, maps California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell, S. Half Moon Bay Reach-A Preliminary Geologic Map of San Mateo County, California AUTHOR(S): Brabb, E. E.; Pampeyan, E. H. SOURCE: U.S. Geological Survey Miscellaneous Field Studies Map MF-328, scale 1:62,500, 1 sheet, pages 10 DATE: 01/01/72 ABSTRACT: A single sheet, 1:24,000 scale, black-and-white, geologic map presenting detailed information including bedding attitudes and locations of small faults. Special attention is given to Holo- cene (younger than 10,000 years old) deposits, which are divided in 7 mapping units. This map is superseded by a color version published in 1983 by Brabb and Pampeyan as U.S. Geological Survey Miscellaneous Investigation Series Map I-1257A. KEYWORDS: Geomorphology, Survey cliff sediment, geology, maps California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell, S. Half Moon Bay Reach-A Landslide Susceptibility in San Mateo County, California AUTHOR(S): Brabb, E. E.; Pampeyan, E. H.

SOURCE: U.S. Geological Survey Miscellaneous Field Studies Map MF-360, scale 1:62,500, 1 sheet DATE: 01/01/78 ABSTRACT: A black-and-white, 1:62,500 scale map classifying landslide susceptibility into 7 categories from low to high. The map was contructed from three earlier maps: (1) a geologic map of San Mateo County (Brabb and Pampeyan, 1972, USGS MF-328); (2) a map inventory of landslides (Brabb and Pampeyan, 1972, USGS MF-344); and (3) an unpublished experimental slope map. KEYWORDS: Geomorphology, Survey geology, geomorphic processes, maps California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell, S. Half Moon Bay Reach-A Preliminary Geologic Map of the La Honda and San Gregorio Quadrangles, San Mateo County, California AUTHOR(S): Brabb, E. E. U.S. Geological Survey Open-File Report 80-245, scale 1:24,000, SOURCE: 1 sheet DATE: 01/01/80 ABSTRACT: This 1:24,000 scale, black-and-white, geologic map includes the San Mateo County coastline between 1.5 miles north of Pigeon Point and Martin's Beach. The map shows numerous bedding atti- tudes. A major map feature is the northwest-trending San Gregorio Fault zone, which intersects the coastline about 1/2 mile north of San Gregorio Beach. KEYWORDS: Geomorphology, Survey cliff sediment, dunes, geology, maps California, Subregion III, Half Moon Bay Cell, S. Half Moon Bay Reach-A Map Showing Direction and Amount of Dip in Sedimentary Rocks in San Mateo County, California AUTHOR(S): Brabb, E. E.; Pampeyan, E. H. SOURCE: U.S. Geological Survey Miscellaneous Investigation Series, Map I-1257C, scale 1:62,500, 1 sheet DATE: 01/01/83 A 1:62,500 scale geological map that color codes bedding ABSTRACT: dips. Good for an overall impression of the variability of bedding dips in San Mateo County. Raw data is also plotted on the map. KEYWORDS: Geomorphology, Survey cliff sediment, geology, maps California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell, S. Half Moon Bay Reach-A

Geologic Map of San Mateo County, California AUTHOR(S): Brabb, E. E. SOURCE: U.S. Geological Survey Miscellaneous Investigation Series, Map I-1257A, scale 1:62,500, 1 sheet DATE: 01/01/83 ABSTRACT: A color, 1:62,500 scale, map with bedding attitudes. Coloring was done by a digital process using a computer and a laser. The process did not detect small map units, especially thin elongate units, causing errors in their coloration. A more useful map for delineating the small units is, "A preliminary geologic map of San Mateo County" by Brabb and Pampeyan published as USGS Miscellaneous Field Studies Map MF-328 in 1972. KEYWORDS: Geomorphology, Survey cliff sediment, geology, maps California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell, S. Half Moon Bay Reach-A Sedimentation and Margin Tectonics of the Coastal Belt Francis- can, Mendocino Coast, Northern California. AUTHOR(S): Brachman, Steven B. SOURCE: University of California, Davis, Ph D. Thesis in Geology, 166 pages and maps. DATE: 09/01/79 ABSTRACT: On the Mendocino coast, the coastal belt of the Franciscan com- plex represents the latest cretaceous and early tertiary part of the accretionary prism of an arc-trench system in Northern California. Styles of deformation can be defined on a numeric scale, with the end members ranging from sheared, boudinaged, and stratigraphically discontinuous beds to continuous beds with little structural disruption. Mapping and contouring these tectonic styles reveal several scales of deformation geometry in the rocks. KEYWORDS: Geomorphology geology, neotectonics, petrology, sedimentation California, Subregion II, S. Spanish Flat Reach, Ten Mile River Cell, S. Ten Mile River Reach, Navarro River Cell Coastal Controls in California: Wave of the Future AUTHOR(S): Breeden, R. C. SOURCE: Harvard Journal on Legislation, Volume II, No. 3, pages 463-508 Journal Announcement: SWRA1314, Water Resources Abstracts, Minneapolis, MN: Environmental Hydrology Corp, (145151 W80-04779) DATE: 01/01/74 ABSTRACT: In response to a perceived manmade threat to the natural characteristics of the California coastal zone, a citizen- sponsored coastal

initiative, the 1972 California Coastal Zone Conservation Act (Act) was enacted. The Act's provisions are analyzed; the results of its operation during the first 16 months are examined; and its legal implications are considered. Briefly examined are the unique power, duties, membership requirements and responsibilities of the enforcement commissions. Early problems have been encountered, most significantly the enormous backlog of permit applications. Instances of permit denials and conditional grants are examined. KEYWORDS: Socioeconomics institutions/planning/mgmt., shoreline changes, shoreline use, urbanization California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V A Study of Water Circulation in Monterey Harbor Using Rhodamine B Dye AUTHOR(S): Breidenstein, John F.; Thomas, David M. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 73 pages (AD-618 881) DATE: 01/01/65 ABSTRACT: Rhodamine B dye was used to determine water circulation in Monterey Harbor. Point and line dye sources were traced visually, photographically, and by use of a fluorometer. The spreading of dye boundaries and the concentrations observed are presented in a time series of synoptic charts for each of the four surveys conducted. From these measurements, mean flow rates and a dye diffusion rate were determined. Circulation was found to be dominated by tidal current, but wind-driven currents were important in the outer harbor. Limited data indicate that the subsurface circulation agreed with the surface circulation in most of the surveys. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey aerial photography, hydrographic surveys, nearshore currents, tides, wind, wind transport California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Observation of the Nearshore Water Circulation Off a Sand Beach AUTHOR(S): Brennan, John F.; Meaux, Richard P. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Mater's Thesis, 51 pages, illustrations, tables DATE: 01/01/64 ABSTRACT: The nearshore circulation off a long sand beach at the southern end of the Monterey Bay, California, was studied during February and March 1964.

The wind, wave, and tide conditions prevailing during all of the surveys were nearly the same. The circulation patterns found are presented in the form of schematic charts for each of the five surveys made. The dominant drift was observed to be directly onshore in the area seaward of the surf zone, but inside the surf zone the flow was to the north. Current speeds are presented for the onshore drift, the dominant longshore current, the opposing feeder currents to rips, and the rip currents. KEYWORDS: Coastal Processes, Oceanography & Meteorology, aerial photography, littoral sediment, longshore current, tides, wave transformation, wind California, Subregion IV, S. Monterey Bay Cell In Stock Aerial Photo Program AUTHOR(S): Bristow, Jody SOURCE: W.A.C. Corporation, 520 Conger Steet, Eugene, Oregon, 97402 DATE: 01/18/85 Brochure describing in stock aerial photos that cover 24 ABSTRACT: North- ern California counties. Imagery scale 1:31,680 with enlarge- ments to 1:2,400 available. Current coverage was flown in 1984. Flight directions are north to south and quarter township cen- tered. Photos have stereo mapping coverage. Historical coverage is not currently known. KEYWORDS: Survey aerial photography California, Subregion I, Subregion II, Subregion III Formation and Development of Beach Cusps on Del Monte Beach, Monterey, California AUTHOR(S): Brodie, George J. SOURCE: U.S. Naval Post Graduate School, Monterey, CA, Master's Thesis, 68 pages with pictures and sketches DATE: 09/01/74 ABSTRACT: Observations and measurements were made daily on Del Monte Beach in order to develop a quantitative description of the parameters affecting the formation of beach cusps. Multiple regression techniques were used to formulate an equation relating cusp width to the measured parameters. The life cycle of cusps was studied in order to gain insight into the factors affecting the growth and decay of cusps. It was determined that cusps are depositional in nature and develop sequentially from preferentiral areas of accretion on the beach. The

action of large wind waves, storm surges, and breakers, was observed to destroy beach cusps. KEYWORDS: Coastal Processes, Survey beaches, shoreline changes California, Subregion IV, S. Monterey Bay Cell Oceanographic Observations in Monterey Bay, California, February 1971 to December 1971 AUTHOR(S): Broenkow, William W. SOURCE: Moss Landing Marine Laboratories, Moss Landing, CA, 305 pages, tables, Technical Publication 72-1 DATE: 01/01/72 ABSTRACT: Moss Landing Marine Laboratories began a study of the hydrography of Monterey Bay in February 1971 to determine seasonal and small scale spatial variations in some physical, chemical and biological parameters. The data was gathered to determine the relative influences of the transport of offshore waters through the bay, the discharges of domestic sewages into the bay, and the biochemical changes that occure within the bay. KEYWORDS: Coastal Processes, Survey climatology, hydrographic surveys, offshore/onshore transport, wave climate. wind California, Subregion IV, Santa Cruz Cell, Hydrographic Observations in Elkhorn Slough and Moss Landing Harbor, California, October 1970 to November 1971 AUTHOR(S): Broenkow, William W.; Smith, Richard E. SOURCE: Moss landing Marine Laboratories, Moss Landing, CA, 74 pages, Annual Report, Part 3, July 1972, Technical Publication 72-3 DATE: 07/01/72 In October 1970, Moss Landing Marine Laboratories began an ABSTRACT: observational program to determine the seasonal changes in the water chemistry of Elkhorn Slough and Moss Landing Harbor. This data report contains the first year of data (October 1970 - November 1971). These data are of interest in determing the flushing and mixing mechanisms of the slough and in establishing the effect that local domestic and industrial effluents have on the distribution of these chemical parameters. KEYWORDS: Hydrology & Hydraulics, Survey hydrographic surveys, tidal inlets, tides California, Subregion IV, Santa Cruz Cell, Surface Circulation and Replacement of Water in Monterey Bay

AUTHOR(S): Broenkow, William W.

SOURCE: Moss Landing Marine laboratories, Moss Landing, CA, 95039, Estuarine and Coastal Marine Science 6(6), 583-603, June 1978, Oceanic Abstracts (78-08015), Bethesda, MD DATE: 06/01/78 ABSTRACT: Net surface circulation and nutrient distributions are described from 27 months of observations. Local winds correlate with upwelling episodes. Internal tidal mixing promotes a net upward transport of cool, nutrientrich water at the head of Monterey Submarine Canyon. The predominantly northward flow through the bay suggested by the distributions agrees with current meter measurements, the alignment of the canyon axis and offshore geostrophic observations. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents, submarine canyons, tides, wind California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell A Comparison Between Geostrophic and Current Meter Observations in a California Current Eddy AUTHOR(S): Broenkow, William W. SOURCE: Moss Landing Marine Laboratory, California State University at San Jose, Moss Landing, CA, Deep-Sea Res, Vol 29, No. 11A, pages 1303-1311, Oceanic Abstracts (83-03532), Bethesda, MD DATE: 01/01/82 ABSTRACT: An eddy was observed about 200 km west of the central California coast using geostrophic estimates and a combined Eulerian- Lagrangian method. The eddy was about 80 km in diameter, with a depth-dependent rotational period of between 15 and 32 days. Direct and geostrophic velocity measurements were in good agreement. KEYWORDS: Oceanography & Meteorology climatology, coastal currents California, Subregion III, Subregion IV, Subregion V Map of Monterey County Sureyors, Inc. AUTHOR(S): Brothers, Thomas SOURCE: Monterey County Surveyors, Inc., Salinas, CA DATE: 01/01/68 ABSTRACT: A map of Monterey and San Benito Counties showing river routes, cities and towns, railway stations, highways, judicial township boundaries, road intersections, trails, and national forest boundaries. KEYWORDS: Survey maps California, Subregion IV, Subregion V

A Predesign Report on Marine Waste Disposal AUTHOR(S): Brown and Caldwell SOURCE: City and County of San Francisco, CA, 5 Volumes, tables, illustrations, maps DATE: 09/01/71 ABSTRACT: This was a two year study that found the primary effluent from San Francisco city discharged at appropriate points through properly designed submarine diffusers, would not adversely effect the marine environment of the central bay or the Gulf of the Farallones. The first volume is oceanographic and ecologic base data acquisition and evaluation of alternative locations; Volume 2 is a "Data supplement;" Volume IV is "1973-1974" investigations and preliminary design; " and Volume V is "Delta supplement". KEYWORDS: Oceanography & Meteorology, Socioeconomics environmental constraints, institutions/planning/mgmt., nearshore currents. shoreline use California, Subregion III, Bolinas Bay Cell, San Francisco Cell, S. San Francisco Reach Oceanographic Pre-Design Phase Report; Santa Cruz Wastewater Facilities Planning Study AUTHOR(S): Brown and Caldwell; Harding-Lawson Associates; Kinnetic Laboratories SOURCE: California Water Resources Control Board, Sacramento, CA, 250 pages in various pagings, illustrated, graphs, maps, tables, C-06-1106 DATE: 08/01/78 ABSTRACT: The purpose of the oceangraphic study was to obtain data required to determine the feasibility of an ocean outfall from environmental, engineering and cost considerations; to develop oceangraphic design criteria for such an outfall; and to provide outfall design recommendations. The study area includes the coastline from Point Santa Cruz to Needle Rock Point and from shore to the 120-ft contour. Data collected during the study provided geological, marine biologi- cal and oceanographic characterizaions of the study area. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology coastal structures, environmental constraints, geology, institutions/planning/mgmt., nearshore currents, wave climate California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell Methods for the Analysis of Non-Stationary Time Series with Applications to Oceanography AUTHOR(S): Brown, Hoyd J. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Wave Research Projects, Technical Report HEL-16-3, 135 pages

DATE: 05/01/67 ABSTRACT: This dissertation treats the problem of estimating p (lambda,t) from a finite part of a sample function of the process. Two methods are developed: (1) the case where p (lambda,t) is locally "slowly varying", and (2) the case where p (lambda,t) is linearly separable". The statistical properties of these methods are investigated and approximations to the sampling distribution of the estimators are obtained for the Gaussian case. "Special representations" for the estimates and their variance are obtained. Several examples of the use of the methods are shown. In particular, the time varying spectral KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis, wave climate California, Subregion I, Subregion II, Subregion IV Stabilizing Sand Dunes on the Pacific Coast with Woody Plants AUTHOR(S): Brown, Robert L. SOURCE: U.S. Department of Agriculture, Soil Conservation Service, Miscellaneous Publication No. 892, 17 pages DATE: 02/01/62 ABSTRACT: The study indicates that establishing and maintaining permanent vegetation has proved to be the most effective and efficient means of stabilizing coastal sand dunes. The dune areas on the Pacific coast of North America are the result of accelerated erosion caused primarily by the destruction of a cover of native vegetation. In some areas the climax cover was herbaceous, in others it was woody, and still others it was a combination of herbacelus and woody plants. The choice of plants for the reconstruction of a permanent cover depends on the inherent limitations of the site and the intended land use for the area. KEYWORDS: Coastal Processes coastal erosion problems, dunes California, Oregon Geostrophic Circulation Off the Coast of Central California AUTHOR(S): Brown, Robert L. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, 93940; Government Report Announcements, 74(913): 71, June 28, 1974, Oceanic Abstracts (75-00517), Bethesda, MD DATE: 06/28/74 ABSTRACT: Descriptors: SALINITY; GEOSTROPIC CIRCULATION; CURRENTS; CALIFORNIA COAST; AIR-WATER INTERACTIONS; SEAWATER KEYWORDS: Oceanography & Meteorology climatology, coastal currents, wind California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell

A Preliminary Investigation of Suspended-Sand Discharge of the Russian River, Sonoma County, California AUTHOR(S): Brown, William M., III SOURCE: U.S. Geological Survey Open-File Report, p. 24 DATE: 01/01/71 ABSTRACT: This report compiles periodic observations from November 1965 to March 1967 and daily observation from April 1967 to September 1969 to determine the suspended-sand discharge of the Russian River to the River's estuary. An estimated 380,000 cubic yards per year, for a 5-year period beginning October 1, 1964, was found to reach the estuary. It should be noted that because of the complexity of sediment processes in the estuary, it is not clear how much of the sediment reaching the estuary ends up in the ocean. The data is effected by the large storms of 1964-65. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics grain size, river-bed sediment, river discharge, California, Subregion II, Russian River Cell Sediment Transport and Turbidity in the Eel River Basin, CA AUTHOR(S): Brown, William M., III; Ritter, J. M. SOURCE: U.S. Geological Survey Water-Supply Paper 1986, p. 70 DATE: 01/01/71 ABSTRACT: The Eel River has the highest recorded average annual suspendedsediment yield per square mile of drainage area of any river its size or larger in the United States. This yield, in tons per square mile, is more than 15 times that of the Mississippi River and more than four time that of the Colorado River. During the 10-year period beginning October 1957, the Eel River discharged an average suspended load of more than 31 million tons per year according to measurements made at the Eel River at Scotia, the station farthest downstream on the main stem of the Eel River. An additional suspendedsediment discharge averaging more than 1 1/2 million tons per year during the same period was derived from the basin of the Van Duzen River, a tributary which enters the Eel River a few miles downstream from Scotia. This KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics grain size, precipitation, reservoirs, river discharge, river sediment discharge, stream gaging California, Subregion I, Eureka Cell

A Preliminary Investigation of Suspended-Sand Discharge AUTHOR(S): Brown, William M., III

SOURCE: U.S. Geological Survey, Department of the Interior, Water Resources Division, Sacramento, CA, open-file report, 11 pages, illustration, tables DATE: 03/17/71 ABSTRACT: Preliminary studies show that the suspended-sand discharge of the Russian River to its estuarial reach was an estimated 510,000 tons per year, or about 380,000 cubic yards per year, for a 5-year period beginning October 1. 1964. A need for more detailed sand-transport analyses is indicated by a prevailing instability in sediment-transport, water-discharge relations because of recent flood effects, the complexity of the regulated river system, an insufficiency of pertinent sand-transport data, and the unknowns of estuarial processes. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics estuarine sediment storage, river-bed sediment, river-bed sediment, river sediment discharge, watersheds, watershed sediment California, Subregion II, Russian River Cell Preliminary Map of Erosional and Depositional Provinces and Descriptions of Sediment-Transport Processes in the South and Cen- tral SF. Bay Region CA AUTHOR(S): Brown, William M., III; Jackson, L. E., Jr. SOURCE: U.S. Geological Survey Miscellaneous Field Studies Map MF-515, scale 1:125,000, 3 sheets, pamphlet, 21 pages DATE: 01/01/73 ABSTRACT: This is a preliminary report addressing the sediment system of the south and central San Francisco Bay region. The text describes the major factors--geology and topography, soils, vegetation, communities, land use, rainfall and runoff, and erodibility--affecting the sediment system and how these factors interact within each province with respect to the sediment system. Quantitative information is provided on the three map sheets which include case studies of typical processes of the sediment system in the study area. KEYWORDS: Coastal Processes, Geomorphology, maps, precipitation, reservoirs, river sediment discharge, stream gaging, urbanization California, Subregion III, Bolinas Bay Cell, San Francisco Cell Erosion Processes, Fluvial Sediment Transport, and Reservoir Sedimentation in a Part of the Newell and Zayante Creek Basins AUTHOR(S): Brown, William M., III SOURCE: U.S. Geological Survey, Water-Resources Open-File Report, 31 pages DATE: 01/01/73 ABSTRACT: Sediment transport in the Newell and Zayante basins, about eight

miles north of Santa Cruz, California, were estimated from (1) a reservoir survey of Loch Lomand in 1971 that was compared with a preconstruction survey of 1960, and (2) sampling of sediment transported in suspension by Zayante Creek during the 1970 and 1971 water years. At least 46 acre-feet of sediment transported in suspension accumulated in Loch Lomond in a 10-year period, and an unmeasured quantity of very-fine sediment in the form of a thin layer over much of the reservoir bottom was observed. KEYWORDS: Hydrology & Hydraulics institutions/planning/mgmt., maps, reservoirs, California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell Streamflow, Sediment, and Turbidity in the Mad River Basin, Humboldt and Trinity Counties, California AUTHOR(S): Brown, William M., III U.S. Geological Survey, Menlo Park, CA, Water Resources Div., SOURCE: Report No. USGS-WRI-36-73, USGS-WRD-75-017, 70 pages (AD-A006 608) DATE: 01/01/73 Streamflow, sediment discharge, and turbidity ABSTRACT: characteristics, as they relate to a proposed reservoir on the Mad River near Butler Valley and the river system downstream from it, are addressed in this report. The findings are based on pre-1970 data from 15 sites in the Mad River basin and additional data collected at three of the sites between 1970 and 1973. There is no grain-size data presented in this report. Among the major findings of this study were that the Mad River discharged an average suspended-sediment load of 2,710,000 tons per year during a 13-year period beginning October 1957 and that about 66 KEYWORDS: Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology precipitation, reservoirs, river discharge, river sediment discharge, sand entrapment, stream gaging California, Subregion I, Eureka Cell Sediment Sources and Deposition Sites and Erosional and Deposit- ional Provinces, Marin and Sonoma Counties, California AUTHOR(S): Brown, William M., III SOURCE: U.S. Geological Survey Miscellaneous Field Studied Map MF-625, scale sheet 1, 1:125,000, scale sheet 2, 1:250,000, pamphlet, 32 pages DATE: 01/01/74 ABSTRACT: Geomorphic features were mapped at 1:125,000 scale to describe sediment transport processes along the coast of Marin and Sonoma Counties. These features were those detectable on 1:60,000 or 1:120,000 scale,

stereoscopically paired, color-infrared, vertical aerial transparencies taken on March 30-31, 1971. Several field-checking trips in 1971-72 augmented the photographic work. On the basis of these geomorphic features, the coastline between the mouth of the Gualala River and the Golden Gate was divided into 19 stretches composed of nearly alternating erosional and KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Survey coastal erosion, dunes, geomorphic processes, longshore transport, maps, river sediment discharge California, Subregion II, Subregion III, Russian River Cell, Bodega Bay Cell, Point Reyes Cell, Drakes Bay Cell, Bolinas Bay Cell Sediment Transport, Turbidity, Channel Configuration, and Poss- ible Effects of Impoundment of the Mad River, Humboldt County, California AUTHOR(S): Brown, William M., III SOURCE: U.S. Geological Survey Water-Resources Investigation 26-75, 63 pages, USACE San Francisco District, San Francisco, CA, (2010-03) DATE: 12/01/75 ABSTRACT: Sediment-transport conditions were determined at stations on the Mad River near Arcata and Kneeland. Using a release-flow model and an empirical equation, the long-term suspended-sediment dis- charge at Kneeland was estimated to be about 60 percent of the long-term suspended-sediment discharge at the Arcata station. The study of the proposed impoundment determined that release flows could transport the expected inflow of sediment particles less than 2 millimeters in diameter for the reach of the river downstream from the impoundment site and that release flows KEYWORDS: Geomorphology, Hydrology & Hydraulics geomorphic processes, reservoirs, river discharge, river sediment discharge, sand entrapment, stream gaging California, Subregion I, Eureka Cell The Natural Resources of Elkhorn Slough, Their Present and Future Use AUTHOR(S): Browning, Bruce M. SOURCE: California Department of Fish and Game, Sacramento, CA, Coastal Wetland Series, No. 4., 105 pages and appendices DATE: 01/01/72 ABSTRACT: This report summarizes the history of Elkhorn slough, ecological attractions, educational value, and problems facing its contin- ued existence. KEYWORDS: Geomorphology, Socioeconomics

environmental constraints, institutions/planning/mgmt., sedimentation, tides California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell South Fork Trinity River Watershed Investigation, North Coastal Calfornia AUTHOR(S): Buer, K. Y.; Scott, R. G.; James, S. SOURCE: California Department Water Resources, Red Bluff, CA, The Geological Society of America, 92nd Annual Meeting, San Diego, CA, GEOREF (963691 80-04620) DATE: 11/05/79 ABSTRACT: California; Pacific Coast; hydrology; engineering geology; surveys; slope stability; geologic hazards; Trinity River; Trinity County; Humboldt County; United States; Northern Calfor- nia; South Fork; watersheds; rainfall; erosion; landslides; sedimimentation; transport; stream transport. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology river-bed sediment, river discharge, river sediment discharge, sedimentation, watersheds, watershed sediment California, Subregion I Bolinas Lagoon Study, The Watershed, Runoff and Sedimentation AUTHOR(S): Burgy, Robert H. SOURCE: The Conservation Foundation, Washington, D.C. DATE: 05/15/70 ABSTRACT: Study identified land-use factors benefically or adversely influencing the environment. Gaged sedimentation of Olena Creek & Pine Gulch Creek. Used DH-48 suspended sediment sampler. Maps of drainage areas and surface soil types are included. KEYWORDS: Geomorphology geology, river sediment discharge, sedimentation, watersheds California, Subregion III, Bolinas Bay Cell Coastal Access Analysis in California: An Assessment of Recrea- tion Transportation Analysis in Coastal Planning AUTHOR(S): Burke, James E. SOURCE: University of California, Berkeley, Institute of Transportation Studies, 85 pages, ITS-RR-81-7 DATE: 09/01/81 ABSTRACT: The purpose of this report is to determine how coastal access has been analyzed from a transportation planning perspective. Included is a critical review of seven transportation studies undertaken with local coastal planning programs in California. This report investigates the methodologies that can be used to address this issue. A nontechnical approach was used. KEYWORDS: Socioeconomics beaches, institutions/planning/mgmt., maps, shoreline use, urbanization

California, Subregion I, Subregion II, Subregion IV, Subregion V The Geologic History of the California Coast AUTHOR(S): Buwalda, John SOURCE: Shore and Beach, Journal of the Americian Shore and Beach Preservation Association, O'Brien Hall, University of California, Berkeley, CA, Volume IV, Number 4, pages 153-158, October 1936 DATE: 10/01/36 ABSTRACT: From a talk given on the geologic history of the California coast. The report discusses shore beaches, uplift and depression, terraces and flats, submerged coasts, fault blocks, and the character of the beaches. KEYWORDS: Geomorphology beaches, geology, geomorphic processes California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V The Relationship Between Watershed Geology and Beach Radio- activity AUTHOR(S): Byerly, John R. University of California, Berkeley, Hydraulic Engineering SOURCE: Laboratory, Wave Research Projects, Technical Report (HEL-5-1) DATE: 12/01/62 ABSTRACT: The recent development of a technique utilizing naturally occurring radioactive minerals in monitoring the movement of littoral drift has raised and left unanswered two major ques- tions. How directly is the watershed geology related to the beach radioactivity and to what degree are the quartz diorite plutons which are found at intervals along the coast responsible for the observed variations in concentration of the radioactive minerals? To aid in answering these questions, a correlation between the watershed geology of the Ben Lomond Mountain area, north of Santa Cruz, California, and the radioactivity of the beaches receiving sediment from the watershed has been KEYWORDS: Coastal Processes, Geomorphology geology, littoral sediment, longshore transport, petrology, watershed sediment California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell The Relationship Between Watershed Geology and Beach Radioactiv- ity AUTHOR(S): Byerly, John R. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Report No. ENG-BEB-TM-135, 32 pages DATE: 08/01/63 ABSTRACT: A correlation between the watershed geology of the Ben Lomond Mountain area, north of Santa Cruz, California, and the radio- activity of the beaches receiving sediment from the watershed has been attempted. The

radioactivity of stream and littoral sediments have been presented in terms of concentration of thorium as determined by gamma-ray spectroscopy. The results have not shed any light on the watershed geology-beach radio- activity relationship, as the area of study failed to produce a radiometric anomaly of sufficient magnitude to be reflected in the littoral sediment. The results do show considerable varia- tion in the thorium content of the stream sediment but the var-KEYWORDS: Coastal Processes, Geomorphology beaches, geology, littoral sediment, river sediment discharge, sedimentation, watersheds California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell The California Earthquake of November 4, 1927 AUTHOR(S): Byerly, Perry SOURCE: Bulletin of the Seismological Society of America, Berkeley, CA, Vol. 20, No. 1, March, 1930, pages 53-66, map, tables, diagrams (photocopies) DATE: 03/01/30 ABSTRACT: On November 4, 1927, an earthquake was felt in California from Morgan Hill to Redondo Beach and from the coast to Sanger on the east. The results of this earthquake were investigated. This investigation was supplemented by questionnarires sent by Berkeley Seismographic Station, and the U.S. Coast and Geodetic Surveys. Isoseismals are shown on a map and intensity indicated. The sea-quake and sea-wave accompanying the earthquake are described. KEYWORDS: Geomorphology, Oceanography & Meteorology neotectonics, tsunamis California, Subregion III, Subregion IV, Field Study of Wave Transmission Through a Rubble-Mound Break- water AUTHOR(S): Calhoun, Ronald J. US. Naval Postgraduate School, Monterey, CA, Master's Thesis, SOURCE: 87 pages (AD-721-552) DATE: 03/01/71 ABSTRACT: Characteristics of sea and swell incident at a permeable rubblemound breakwater located in Monterey Harbor, California, are resolved into reflected and transmitted componments. The wave characteristics are studied by analyzing synchronized wave records of three underwater sensors, two to seaward and one landward of the breakwater. This study was unique in that it entails experiments conducted in the field on a prototype structure in the natural

environment. KEYWORDS: Coastal Processes coastal structures, wave climate, wave transformation California, Subregion IV, S. Monterey Bay Cell Proceedings of the First Meeting: April 14, 1968 and April 5, 1968 and the Second Meeting, June 21, 1968 AUTHOR(S): California Advisory Comm on Marine and Coastal Res SOURCE: California Advisory Commission on Marine and Coastal Resources, Sacramento, CA, 101 pages DATE: 04/01/68 ABSTRACT: The first meeting dealt with the history of the Advisory Commission and identified California's broad and intense interest in the marine environment. The second meeting involved reviewing material for proposed plans, and outlined various new proposals. The proceedings pertained to policy and development issues. KEYWORDS: Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., population, property value/land use, shoreline use California, Subregion I, Subregion II, Proceedings of the Third Meeting 1/22-23/68 and Fourth Meeting 1/10-11/69 of the California Advisory Commission on Marine and Coastal Resources AUTHOR(S): California Advisory Comm on Marine and Coastal Res California Advisory Commission on Marine and Coastal Resources, SOURCE: Sacramento, CA, 122 pages DATE: 11/22/68 ABSTRACT: The third meeting considered recommendations of the Governor's Advisory Commission on Ocean Resources, the action of the Interagency Council for Ocean Resources, and various actions to be implemented by other agencies. The fourth meeting included recommendations required to implement development of California's marine resources, including long-term policy actions. KEYWORDS: Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Proceedings of the Fifth Meeting of the California Advisory Commission on Marine and Coastal Resources AUTHOR(S): California Advisory Comm on Marine and Coastal Res SOURCE: California Advisory Commission on Marine and Coastal Resources, Sacramento, CA, 69 pages DATE: 06/06/69 ABSTRACT: Discussion of proposals for legislation, budget requirements, and

the progress of California Comprehensive Ocean Area Plan (COAP). KEYWORDS: Socioeconomics coastal structures, environmental constraints, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Second Annual Report and Proceedings of the Seventh Meeting. Returning the California Public Interest in Coastal Zone Manage- ment. AUTHOR(S): California Advisory Comm on Marine and Coastal Res SOURCE: California Advisory Commission on Marine and Coastal Resources, Sacramento, CA, 95 pages DATE: 12/05/69 ABSTRACT: Report emphasizes the action needed to be taken in California to maintain and enhance social and economic values of its Coastal Zone. Includes Coastal Zone Authority and management, Legislative grants, and policy concerns. Assembly Bill No. 1686 is included. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V Proceedings of the Sixth Meeting of the California Advisory Commission on Marine and Coastal Resources. AUTHOR(S): California Advisory Comm on Marine and Coastal Res SOURCE: California Advisory Commission on Marine and Coastal Resources, Sacramento, CA, 119 pages DATE: 01/01/70 ABSTRACT: Discussion held by various department leaders and committee heads about the development of California's Coastal Environment. Included were budgets, coastal management, offshore drilling, and pesticide use. KEYWORDS: Socioeconomics beach nourishment/dredging, coastal structures, environmental constraints, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Proceedings of the Eigth Meeting of the California Advisory Commission on Marine and Coastal Resources. AUTHOR(S): California Advisory Comm on Marine and Coastal Res SOURCE: California Advisory Commission on Marine and Coastal Resources, Sacramento, CA, 86 pages DATE: 05/01/70 ABSTRACT: Report of proceedings on coastal zone management from the standpoint of proposed and enacted legislation. Various reports presented by department heads. KEYWORDS: Socioeconomics

environmental constraints, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Reports on the Ninth and Tenth Meeting of the California Advis- ory Commission on Marine and Coastal Resources. Ninth 8/28- 29/70, Tenth 12/4-5/70 AUTHOR(S): California Advisory Comm on Marine and Coastal Res California Advisory Commission on Marine and Coastal Resources, SOURCE: Sacramento, CA, 133 pages DATE: 08/28/70 ABSTRACT: Report discussing policy issues, legislation, budget, and the role of San Francisco Bay Conservation and Development Commiss- ion. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V, San Francisco Cell Proceedings of the Eleventh Meeting. "The Monterey Bay Pilot Planning Project: An Experiment in Decision Making in Coastal Zone Planning." AUTHOR(S): California Advisory Comm on Marine and Coastal Res California Advisory Commission on Marine and Coastal Resources, SOURCE: Sacramento, CA, 136 pages DATE: 04/29/71 ABSTRACT: Report involving the re-examination and revisions of quidelines of a Pilot Planning Study of Monterey Bay. It deals with Monterey's tourism industry, recreation, economic sphere, and geography. KEYWORDS: Socioeconomics institutions/planning/mgmt., population, property value/land use, shoreline use, urbanization California, Subregion IV, Subregion V, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Proceedings of the Twelfth Meeting of the California Advisory Commission on Marine and Coastal Resources AUTHOR(S): California Advisory Comm on Marine and Coastal Res SOURCE: California Advisory Commission on Marine and Coastal Resources, Sacramento, CA, 40 pages DATE: 08/20/71 Report regarding the 1971 Coastal Management Legislation. ABSTRACT: Presentations given by various department heads and committee leaders. State policy and developmental issues discussed. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., population, shoreline use, urbanization California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V

The Review of the California Comprehensive Ocean Area Plan. Proceedings of the 13th, 14th, 15th, and 16th meetings AUTHOR(S): California Advisory Comm on Marine and Coastal Res SOURCE: California Advisory Commission on Marine and Coastal Resources, Sacramento, CA, 141 pages DATE: 12/01/72 ABSTRACT: The proceedings include the evaluation of the COAP, policy recommendations, environmental constraints, community desires, resource allocation, carrying capacity, marine resources planning, information base. relationships to existing or pending programs and policies, and future technology. Also included is a copy of the California Coastal Zone Conservation Act of 1972. KEYWORDS: Socioeconomics coastal structures, environmental constraints, institutions/planning/mgmt., population, shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Bank and Shore Protection in California Highway Practice AUTHOR(S): California Business and Transportation Agency; California Department of Public Works SOURCE: California Department of Public Works, Sacramento, CA, 423 pages DATE: 11/01/70 ABSTRACT: A report siting the hazards of erosion, hazards of location, the classifications of protective devices, the principles for design, construction procedures, coordination, and maintenance devices. Included are various pictures and graphs. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics beaches, coastal erosion, coastal erosion problems, geomorphic processes, institutions/planning/mgmt., shore protection California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Summary, Intensity of Development; An Element of the Coastal Plan AUTHOR(S): California Central Coast Regional Commission SOURCE: California Central Coast Regional Commission, 54 pages, illustrations, archived at the University of California, Berkeley, Water Resources Archives DATE: 11/15/74 ABSTRACT: This is the eighth of nine reports being prepared as part of the Coastal Zone Plan. It describes the intensity element derived from the requirements of the California Coastal Zone Conservat- ion Act. KEYWORDS: Socioeconomics institutions/planning/mgmt., property value/land use, shoreline use, urbanization California, Subregion I, Subregion II, Subregion IV, Subregion V

Tentative Findings and Policies to be Recommended by the Central Coast Regional Commission to the CA Coastal Zone Conservation Commission AUTHOR(S): California Central Coast Regional Commission SOURCE: California Central Coast Regional Commission, Unpublished, archived at University of California, Berkeley, CA, Water Resources Archives, 33 pages DATE: 01/06/75 ABSTRACT: Findings concerning the California Coast such as areas hazardous for development, population levels, the coast as a public resource. The Central Coast Regional Commission suggests policies to regulate development in urban areas, preserve critical coastal resources, and ownership of land along the shoreline. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., population, California, Subregion I, Subregion II, Subregion IV, Subregion V Newsletters, Fact Sheets, Miscellaneous Pamphlets . AUTHOR(S): California Coastal Alliance SOURCE: California Coastal Alliance, Woodside, California, 1 envelope of loose sheets. DATE: 01/01/72 ABSTRACT: Literature prepared for the public to inform them of present proposals concerning the coastal zone. A general news report of pertinent stories and information. KEYWORDS: Socioeconomics beaches, coastal structures, environmental constraints, institutions/planning/mgmt., population, shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Comprehensive Ocean Area Plan (COAP) AUTHOR(S): California Coastal Commission SOURCE: California Coastal Zone Comission, San Francisco, CA DATE: 08/24/67 ABSTRACT: A study undertaken to provide a general understanding of California's coastal zone. Concerned with planning and management. A description of the state's natural environment, an analysis of selected land and water uses and COAP recommen- dations. Also provided are sample maps and photos. KEYWORDS: Socioeconomics coastal structures, growth potential/recreation, institutions/planning/mgmt., population, property value/land use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V

Local Coastal Program Regulations AUTHOR(S): California Coastal Commission SOURCE: California Coastal Commission, San Francisco, CA, 58 pages DATE: 05/17/77 These regulations prescribe the procedures for the ABSTRACT: preparation, approval, and amendment of any local coastal program adopted by the California Coastal Commission. The regulations include a common methodology for local coastal programs. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V Coastal News AUTHOR(S): California Coastal Commission SOURCE: California Coastal Commission, San Francisco, CA, various volumes from 1978 and 1979 each about 6-8 pages DATE: 12/01/79 ABSTRACT: This is a newsletter from the California Coastal Commission which reports the coastal news such as latest legislative action, workshops and court decisions concerning the coast. KEYWORDS: Socioeconomics institutions/planning/mgmt., property value/land use, shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V California Coastal Plan AUTHOR(S): California Coastal Zone Conservation Commission SOURCE: California Coastal Zone Conservation Commission, San Francisco, CA, 443 pages, illustrations, photos DATE: 12/01/72 ABSTRACT: This is the California Coastal Plan mandated by the coastal initiative (Prop. 20) in 1972. It is designed to meet 2 goals; the first is to protect the CA coast as a great natural resource and second is to use the coast to meet human needs while pro-tecting the coast. It contains findings and policies, plan maps and regional summaries, and ways to carry out the coastal plan. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., maps, population, shoreline use, urbanization California, Subregion I, Subregion II, Subregion IV, Subregion V The Coastal Land Environment AUTHOR(S): California Coastal Zone Conservation Commission

SOURCE: California Coastal Zone Conservation Commission, San Francisco, CA, 81 pages DATE: 10/16/74 ABSTRACT: This is a report of statewide findings and policies concerning the coastal land environment as a natural system. It is concerned with (1) coastal natural areas, including salt marshes (2) coastal streams and flood plains; (3) coastal mineral resources; (4) coastal soils and their special values for agricultural and forestry use; (5) the coastal airshed as directly influenced by the ocean. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., mining, urbanization, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V Intensity of Development AUTHOR(S): California Coastal Zone Conservation Commission Prepared for The Central Coast Regional Commission, 189 pages, SOURCE: tables, illustrations, available at University of California, Berkeley, Water Resources Archives DATE: 11/18/74 ABSTRACT: This report was the eighth of nine reports prepared as a part of the Coastal Zone Plan. The report describes existing conditions, patterns of development in the Coastal Zone, the provision of public resources and development, impact of development upon resources in already and nondeveloped areas of the coast & possible approaches to implementing intensity policies. KEYWORDS: Socioeconomics institutions/planning/mgmt., population, shoreline use, urbanization California, Subregion I, Subregion II, Geology AUTHOR(S): California Coastal Zone Conservation Commission SOURCE: California Coastal Zone Conservation Commission, San Francisco, CA, 39 pages, illustrated DATE: 11/19/74 ABSTRACT: This paper details the 4 major geologic hazards in the California Coastal Zone: earthquakes, tsunami & storm waves, landslide, and shoreline and bluff erosion. Policies to alleviate the effects of these hazards are discussed. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics coastal erosion, institutions/planning/mgmt., shoreline changes, shore protection, storm waves, tsunamis California, Subregion I, Subregion II, Subregion IV

Recreation AUTHOR(S): California Coastal Zone Conservation Commission SOURCE: California Coastal Zone Conservation Commission, San Francisco, CA, 52 pages DATE: 12/17/74 ABSTRACT: This paper lists the statewide findings concerning recreation on the California Coast. Included are discussing of future recreation use of the coast, conflicts between recreational activities, economic importance of recreation, and the policies adopted by the State in response to the findings. KEYWORDS: Socioeconomics growth potential/recreation, institutions/planning/mgmt., property value/land use California, Subregion I, Subregion II, Subregion IV, Subregion V Appearance and Design AUTHOR(S): California Coastal Zone Conservation Commission California Coastal Zone Conservation Commission, San Francisco, SOURCE: CA, 113 pages, illustrations, tables DATE: 12/17/74 ABSTRACT: This paper details the statewide findings concerning the California Coast such as the complexity of analyzing coastal visual resources, deterioration of coastal appearance, and need for design evaluation. Also listed are statewide policies in response to these findings. KEYWORDS: Socioeconomics institutions/planning/mgmt., shoreline use, urbanization California, Subregion I, Subregion II, Subregion IV, Subregion V Government, Powers, & Funding of California Coastal Zone Management: An Overview AUTHOR(S): California Coastal Zone Conservation Commission SOURCE: California Coastal Zone Conservation Commission, San Francisco, CA, 106 pages, illustrations DATE: 03/04/75 ABSTRACT: This paper evaluates the alternatives and proposes the basic powers, funding, and governmental organization that are needed to achieve the goals of the coastal plan. The goals of the coastal plan are protection, conservation, management, preserv- ation, enhancement, restoration, and planning of the coast. KEYWORDS: Socioeconomics institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V

Preliminary Coastal Plan, Hearing Draft AUTHOR(S): California Coastal Zone Conservation Commission SOURCE: California Coastal Zone Conservation Commission, San Francisco, CA, 385 pages, folding maps DATE: 03/06/75 ABSTRACT: This hearing was concerned with the prospect that by the end of 1976 there will be no single plan for the CA coast. Findings and policies for coastal protection and development are detailed. Ways government agencies can carry out the plan are evaluated, and included are plan maps to show how policies might affect specific coastal areas. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., maps, property value/land use, shoreline use, urbanization California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Tidal Elevation at Fort Point, Collinsville, Bouldin, Hydrographs of Tides AUTHOR(S): California Debris Commission SOURCE: California Debris Commission Office, San Francisco, CA, one graph DATE: 03/14/19 ABSTRACT: Graph of tides and wind direction of Fort Point, San Francisco, California. KEYWORDS: Coastal Processes, Oceanography & Meteorology tides, wind California, Subregion III, San Francisco Cell Guidelines for State Reimbursement on Federal Beach Erosion Control Projects AUTHOR(S): California Department of Boating and WaterWays SOURCE: California Department of Boating and Waterways, Sacramento, CA, 40 pages DATE: 06/01/80 The Department of Boating and Waterways is charged with the ABSTRACT: responsibility for administering state beach erosion control funds for all eligible projects. All local participation funds for construction are deposited with the Department. The local agency directly acquires rights-of-way and makes relocations for these projects. In order to uniformly administer this program throughout the State, the Department has established the guide- lines presented in this publication. KEYWORDS: Socioeconomics coastal erosion problems, institutions/planning/mgmt., property value/land use California, Subregion I, Subregion II, Subregion IV, Subregion V

Effects of Sandpit Operations in the San Lorenzo River Drainage AUTHOR(S): California Department of Fish and Game SOURCE: California Department of Fish and Game, Sacramento, CA, 5 pages, illustrations, Project No. 53-3-8 DATE: 08/12/52 ABSTRACT: Results of a survey of the San Lorenzo watershed concerned with evaluating the effects of waste discharge from sand plants. It included an inspection of sand plant washing procedures, the facilities used for disposal of the silt wastes resulting from washing operations, inspection of stream bottom above and below the outfalls of silt discharge, determining the effect of discharge on spawning beds, and a comparative survey of the general abundance and kinds of aquatic life above and below the outfalls. KEYWORDS: Hydrology & Hydraulics river-bed sediment, river sediment discharge, urbanization, watersheds, watershed sediment California, Subregion IV, Santa Cruz Cell California Cooperative Oceanic Fisheries Investigations-Progress Report-1 July 1956 to 1 January 1958 AUTHOR(S): California Department of Fish and Game California Department of Fish and Game, Sacramento, CA, Marine SOURCE: Research Committee, 57 pages, graphs, tables, bibliography DATE: 01/01/58 ABSTRACT: A comprehensive study of the Fishery along the California coast from 1949 to 1956. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology coastal currents, longshore current, nearshore currents, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Aerial Photos of California Coastline AUTHOR(S): California Department of Fish and Game SOURCE: California Department of Fish and Game, Sacramento, CA DATE: 01/01/61 ABSTRACT: Series 61-1 to 61-1-193, Oregon Line to Rockport, Calif; 61-1-1 to 61-2-200, Rockport to Golden Gate Bridge; 61-3-1-217, Golden Gate Bridge to Cayucos, Calif; 61-4-1 to 61-4-121, No. of Cayucos to Capitola; 6-5-1 to 6-15-212, Capitola Del Mar; 6-6-1 to 6-6-41, Del Mar to Mexico. KEYWORDS: Survey aerial photography California, Subregion I, Subregion II, Subregion IV, Subregion V Program for California's Beaches and Parks AUTHOR(S): California Department of Natural Resources

SOURCE: California State Department of Natural Resources, Sacramento, CA, State Park Commission, 96 pages, illustrations, tables DATE: 01/02/61 ABSTRACT: This is a detailed program for recreation on a state level. It suggests state park commission quidelines, the state water plan, and the need for Federal Lands. KEYWORDS: Socioeconomics institutions/planning/mgmt., population, shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Comprehensive Ocean Area Plan Development Program; Aerial Photo- graphs of California Coastline AUTHOR(S): California Department of Navigation and Ocean Dev. California Department of Navigation and Ocean Development, SOURCE: Sacramento, CA, not published, 1 volume, unpaged, maps DATE: 05/01/71 These are vertical aerial photographs, taken in one strip ABSTRACT: along entire CA coastline. 2,700 photos were taken, in 9 different rails, from altitude of 12,000 feet, giving the contact prints a scale of 1 inch equal 1,000 ft. (1:12,000), or a view dimension of 9,000 by 9,000 feet w/60% overlap for stereo viewing. Each photo covers about 1 mile onshore & 1/2 mile offshore. KEYWORDS: Survey aerial photography California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Shore Protection in California AUTHOR(S): California Department of Navigation and Ocean Dev. SOURCE: California Department of Navigation and Ocean Development, Sacramento, CA, 51 pages, tables, charts, maps, photos DATE: 04/01/76 ABSTRACT: Report is designed to help the public understand shoreline erosion problems. Contains a brief description of the forces of nature that form the beaches and erode the bluffs, the effect of man on the process, and the available means for corrective action. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Socioeconomics beach nourishment/dredging, coastal erosion, coastal erosion problems, institutions/planning/mgmt., shore protection, storm damage California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V

Assessment and Atlas of Shoreline Erosion along the California Coast AUTHOR(S): California Department of Navigation and Ocean Dev.

SOURCE: California Department of Navigation and Ocean Development, Sacramento, CA, 69 Pages & Appendices DATE: 07/01/77 ABSTRACT: This report and atlas present an assessment of the erosion that is occurring along the ocean shoreline of the State. The report/atlas identifies the nature of the entire coastline and those sections of the coast which are presently subject to damage from erosion, those sections which could be subject to damage if not properly developed, and those sections where preventive measures have been taken to protect the land against wave action. KEYWORDS: Coastal Processes, Geomorphology, Survey aerial photography, coastal erosion, coastal erosion problems, longshore transport, maps, California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Statistical Report for the Division of Beaches and Parks AUTHOR(S): California Department of Parks and Recreation News and Views, California Department of Parks and Recreation, SOURCE: Sacramento, CA DATE: 01/01/63 ABSTRACT: Statistical data for various locations in California during 1963 and 1964. Included are number of campsites, water front acreage, acquisition, development and revenue figures. KEYWORDS: Socioeconomics coastal structures, property value/land use, shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V Point Lobos State Reserve and Carmel River State Beach General Plan AUTHOR(S): California Department of Parks and Recreation SOURCE: California Department of Parks and Recreation, Sacramento, CA, The Resources Agency, V1, 181 pages, illustrations, photos, maps (some fold): 28 cm, includes bibliographies DATE: 10/01/79 ABSTRACT: This is a general plan for Point Lobos State Reserve and Carmel River State Beach. The purpose of the plan is to address the need for changes in resource management and development. A thorough analysis and evaluation of all the resources and the environmental impact of any changes were made. KEYWORDS: Socioeconomics environmental constraints, growth potential/recreation, shoreline use California, Subregion V, Carmel River Cell, S. Carmel River Reach Survey of Beaches in Monterey County AUTHOR(S): California Department of Public Health

SOURCE: California Department of Public Health Sacramento, CA, Bureau of Sanitary Engineering, 12 pages DATE: 09/09/57 ABSTRACT: Survey concerning the quality of beaches in Monterey County and to determine safety measures for protection of the public. Used to aid in writing new regulations for the proper operation of public salt water beaches. Maps are included. KEYWORDS: Socioeconomics beaches, institutions/planning/mgmt., population, property value/land use. shoreline use, urbanization California, Subregion IV, Subregion V, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell, S. Carmel River Reach, Point Sur Cell El Granada Beach Investigation AUTHOR(S): California Department of Public Health San Francisco Regional Water Pollution Control Board, SOURCE: Sacramento, CA, 26 pages, illustration, photos DATE: 07/01/58 ABSTRACT: A special investigation made of El Granada Beach and the receiving waters near the El Granada Sewer District maintenance outfall. Determine compliance with effluent requirements as set forth in Resolution 231 of the San Francisco Regional Water Pollution Control Board. This survey includes 23 sampling days over a period of three months. KEYWORDS: Socioeconomics environmental constraints, shoreline use, urbanization California, Subregion III, Half Moon Bay Cell Survey of Beaches and Receiving Waters, Pacifica AUTHOR(S): California Department of Public Health SOURCE: California Department of Public Health, Sacramento, CA, Bureau of Sanitary Engineering, 2 volumes, illustrations, (V. 2 is the follow-up survey of the beach September 15 to 26 1958) DATE: 07/29/58 ABSTRACT: A survey was made of the beaches and receiving waters in the vicinity of the three sewage treatment plants for the city of Pacifica during March, April, and May 1958. Appendices A, B, and C contain information concerning the sewage effluents from the Sharp Park, Rockaway Beach, and Linda Mar treatment plants. KEYWORDS: Socioeconomics environmental constraints, shoreline use, urbanization California, Subregion III, San Francisco Cell

Flood of 1950 in California

AUTHOR(S): California Department of Public Works; Division of Water Resources SOURCE: California Department of Public Works, Sacramento, CA, Division of Water Resources, 43 illustrations, maps (fold out), photos DATE: 12/18/50 ABSTRACT: This report describes a series of storms during the period November 13 to 15, 1950. Topics include precipitation, flood runoff, flooded areas and flood damage, flood control works, and the California Water Plan. Photos are also included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., precipitation, reservoirs, storm damage, storms/floods, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V California Floods of December 1955 AUTHOR(S): California Department of Public Works; Division of Water Resources SOURCE: California Department of Public Works, Sacramento, CA, Division of Water Resources, 1 volume (various pagings), illustration, revised DATE: 01/01/56 ABSTRACT: Report includes a discussion of the Dec. 1955 storm and resultant floods;, data on flood flows and stages; preliminary estimates of flood damages; a description of the functioning of existing flood control works, and recommendations for action to provide supplemental and additional facilities to prevent recurrence of such a flood disaster. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., precipitation, property value/land use, river discharge, storm damage, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Report on Beach Erosion - Transcript of Proceedings AUTHOR(S): California Department of Public Works SOURCE: Hearing of the Subcommittee on Conservation, Assembly Committee on Natural Resources, California Department of Public Works, Sacramento, CA, 115 pages, figures DATE: 01/21/66 ABSTRACT: Transcript of a subcommittee hearing on shoreline erosion problems in Capitola, CA. Includes: beach erosion due to longshore transport, damage costs, repair and maintenance of existing coastal structures proposed new structures, effect of existing structures on environmental balance, and the role of the state and federal governments in control and prevention of erosion problems. KEYWORDS: Coastal Processes beaches, coastal erosion problems, coastal structures, institutions/planning/mgmt., longshore transport, shore protection California, Subregion IV, Santa Cruz Cell Bulletin No. 5, California Streams AUTHOR(S): California Department of Water Resources SOURCE: California Department of Water Resources, Sacramento, CA, Appendix A, 557 Pages and figures DATE: 01/01/23 ABSTRACT: An investigation of California water resources between 1921-1923. Topics include, geography geomorphology, pre- cipitation and river discharge. KEYWORDS: Geomorphology, Hydrology & Hydraulics precipitation, river discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V Flow and Quality Characteristics of the Russian River, Report Number 2 AUTHOR(S): California Department of Water Resources California Department of Water Resources - Division of Resource SOURCE: Planning, Sacramento, CA, Report Number 2 DATE: 01/01/51 ABSTRACT: A compilation of available hydrological data and analysis of water samples collected at four - hour intervals for a period of five days, from thirteen stations along the Russian River. Also included is data on municipal water supplies, sewage treatment and disposal facilities. Tables and a map included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, river discharge, stream gaging, urbanization California, Subregion II, Russian River Cell Views & Recommendations of the State of California on a Proposed Report of the Chief of Engineers, Department of the Army, on Beach Erosion Control AUTHOR(S): California Department of Water Resources SOURCE: California Department of Water Resources, Sacramento, CA, 4 pages DATE: 02/05/57 ABSTRACT: Views and recommendations of the State of California on the USACE Beach Erosion Control report in Santa Cruz County, California. KEYWORDS: Coastal Processes, Socioeconomics beaches, coastal erosion, institutions/planning/mgmt., shore protection California, Subregion IV, S. Half Moon Bay Reach-A, S. Half Moon Bay Reach-B, Santa Cruz Cell, Santa Cruz Cell California Floods of 1958

AUTHOR(S): California Department of Water Resources; Division of Design and Construction SOURCE: California Department of Water Resources, Sacramento, CA, Divsion of Design and Construction, 44 pages, illustrations, appendixes, tables, plates, photos DATE: 05/01/59 ABSTRACT: This report, prepared pursuant to the provisions of Section 8300 of the California Water Code, contains descriptions of the general weather characteristics during the periods of heaviest precipitation in 1958 and а overview of the storms of February and March-April and the resulting flood runoff. Also included are a discussion of the spring snowmelt runoff, a discussion of responsibilities during flood emergencies, and recommendations for action to provide supplemental and additional facilities to to prevent or minimize the recurrence of flood damages. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., precipitation, stream gaging, storms/floods, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V Erosion Studies, San Lorenzo Valley, Santa Cruz County; a report to Central Coast Regional Water Pollution Control Board AUTHOR(S): California Department of Water Resources SOURCE: California Department of Water Resources, Sacramento, CA, 9 leaves, illustrations, photos, The Resources Agency DATE: 03/01/63 ABSTRACT: This study was initiated because of concern over a sand mining operation and processing plant at the head of Azalea Dell Creek, northwest of Olympia. The plant, may have caused increased sedimentation in both Azalea Dell and Zayante Creeks, resulting in silt-filled pools, damage to fish life and loss in scenic and and recreational values. Investigations of complaints from residents, and problems related to silting of pools, effects on aquatic life, and water quality were also part of the investig- ation. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., mining, property value/land use, river discharge, sedimentation, watershed sediment California, Subregion IV, Santa Cruz Cell North Coastal Area Investigation AUTHOR(S): California Department of Water Resources

SOURCE: California Department of Water Resources, Sacramento, CA, preliminary

edition Bulletin No. 136 DATE: 09/01/64 ABSTRACT: Seven major multipurpose water projects for export, flood control, power production, fishery enhancement, and recreation were under consideration. These were the (1) Upper Eel River Development, (2) Paskenta-Newville Projects, (3) Trinity River Development, (4) Greater Berryessa Projects, (5) Lower Eel River Development, and (6) Klamath River Development, and (7) Knights Valley Project. Tables show water requirements, precipitation, runoff, geology, and hydroelectric developments. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics geology, institutions/planning/mgmt., population, precipitation, storms/floods, watersheds California, Subregion I, Subregion II, Subregion III Beach Erosion Investigation Program AUTHOR(S): California Department of Water Resources SOURCE: California, the Resources Agency, California Department of Water Resources, Sacramento, CA, San Francisco Bay District, Progress Report, USACE, San Francisco District, 73 pages DATE: 12/01/67 ABSTRACT: The Department of Water Resources and the U.S. Army Corps of Engineers, San Francisco District, cooperated in a study reported in "Technical Report on Cooperative Beach Erosion Study of Coast of Northern California, Point Delgada to Point Ano Nuevo, Appendix VIII", published in June 1965. This was the first comprehensive basic information study of the central coast of California. The study covered the coastline from Point Delgada, south of Eureka, to Point Ano Nuevo, north of Santa Cruz, and was conducted by the Corps of Engineers for the purpose of obtaining data on shore processes and shore problems. This progress report summarizes KEYWORDS: Coastal Processes aerial photography, beaches, beach profiles, wave climate California, Subregion II, Subregion III, Subregion IV, Subregion V Eel River Development Alternatives AUTHOR(S): California Department of Water Resources SOURCE: California Department of Water Resources, Sacramento, CA, Bulletin No. 172, 36 pages DATE: 12/01/69 ABSTRACT: The report summarizes the cost, water supply, flood control, and

recreation affects of the principal alternatives. In addition, the report contains discussions of some of the environmental effects of these alternatives, such as impact on fish and wild-life, land inundated, and people displaced. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, geology, institutions/planning/mgmt., reservoirs California, Subregion II, S. Spanish Flat Reach, Ten Mile River Cell, S. Ten Mile River Reach, Navarro River Cell Eel River Development Alternatives, Supporting Studies AUTHOR(S): California Department of Water Resources California Department of Water Resources, Sacramento, CA, SOURCE: Bulletin No. 172, appendix, 120 pages DATE: 01/01/70 ABSTRACT: Outlines the procedures and criteria used in the study of Eel River development alternatives, and gives details of the various alternatives. Includes economic criteria, geology and design, water supply studies, flood control studies, environ-mental studies, and a discussion of each project alternative. KEYWORDS: Hydrology & Hydraulics, Socioeconomics geology, institutions/planning/mgmt., reservoirs, river discharge, watersheds California, Subregion I, Eureka Cell Geophysical Interpretation, Marine Seismic Survey, Crescent City Harbor AUTHOR(S): California Department of Water Resources California Department of Water Resources, Sacramento, CA, The SOURCE: Resources Agency, Geophysical Surveys Section DATE: 11/01/70 Report describing and discussing the results of sub-bottom ABSTRACT: profiling by an acoustical reflecting method using an Edo Western Model 415. (3.5 Kilocycles per second) pinger system. The geo- physical survey was performed by Crawford Marine in the Crescent City Inner Harbor. The approximate thickness of sand and/or gravel and unconsolidated matereials varies between 5-10 feet at the time the survey was performed. KEYWORDS: Geomorphology, Survey geology, hydrographic surveys, petrology California, Subregion I, Klamath River Cell Hydrologic Data: 1970, Volume 1: North Coastal Area AUTHOR(S): California Department of Water Resources SOURCE: California Department of Water Resources, Sacramento, CA, California Resources Agency, Bulletin Number 130-70, 55 pages, maps, table

DATE: 12/01/71 ABSTRACT: Bulletin NO. 130-70 presents comprehensive hydrologic data for the N. Coast area. The hydrologic data programs of the Depart- ment of Water Resource supplement the data collection activities of other agencies and help satisfy needs of these agencies for data on the quality and quantity of water in the state. KEYWORDS: Hydrology & Hydraulics climatology, precipitation, river discharge, stream gaging California, Subregion I, Subregion II California High Water AUTHOR(S): California Department of Water Resources SOURCE: California Department of Water Resources, Sacramento, CA, Bulletin No. 69 (serial) DATE: 11/01/73 ABSTRACT: Bulletin No. 69-72, describes precipitation, runoff, flooding, and the general weather patterns that precede and coincide with storm periods in 1971-72. The bulletin also includes tabulations of precipation data, peak streamflows and stages, hydrographs of streamflow and reservior operations, and weir overflow graphs. KEYWORDS: Hydrology & Hydraulics precipitation, reservoirs, river discharge, stream gaging, storms/floods, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V Van Duzen River Basin Environmental Atlas, with appendix AUTHOR(S): California Department of Water Resources SOURCE: California Department of Water Resources - Northern District, The Resources Agency, appendix included, Sacramento, CA, 102 pages DATE: 02/01/76 Atlas using large-scale maps to present a wide range of ABSTRACT: physical and cultural information for the Van Duzen River Watershed. KEYWORDS: Hydrology & Hydraulics aerial photography, maps, watersheds California, Subregion I, Eureka Cell Mad River Watershed Erosion Investigation AUTHOR(S): California Department of Water Resources SOURCE: California Department of Water Resources, Sacramento, CA, California Resources Agency, Northern District, 89 Pages DATE: 06/01/82 ABSTRACT: This reconaissance report presents the results of a one-year study of erosion and two-year study of turbidity in the Mad River Basin. It includes

maps of geology and landslides and and timber harvest and burns. Tables and Photographs included. KEYWORDS: Geomorphology, Hydrology & Hydraulics geology, property value/land use, reservoirs, river sediment discharge, urbanization, watersheds California, Subregion I, Eureka Cell The Big Flood, California 1955 AUTHOR(S): California Disaster Office SOURCE: California Disaster Office, Sacramento, CA, 126 Pages, illustrations, folding maps, photos DATE: 01/01/55 ABSTRACT: This is a description of the 1955 flood and presentaion of the flood study of facts and recommendatons on disaster operations made by the California disaster office and of some 100 civil defense directors in the flood areas. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, storm damage, storms/floods, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V The Southern Monterey Bay Littoral and Coastal Environment and the Impact of Sand Mining AUTHOR(S): California Division of Mines and Geology SOURCE: Letter report from Edward E. Welday, Division of Mines and Geology, San Francisco District, to Donald J. Evertts, State Lands Commission, Los Angeles, CA, 20 September 1972 DATE: 09/22/72 ABSTRACT: This report documents prehistoric erosion for the Monterey Bav region as a whole and historic erosion at several sites. Some sites are within the areas of sand mining and some of the erosion can be related to sand removal. Other locations have been subjected to erosion, but they are removed from the effects of sand mining by the prevailing littoral conditions. A principle problem is interception of sand by dams on the Salinas River. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, littoral sediment, mining, California, Subregion IV, S. Monterey Bay Cell Sonoma County Coastal Geology for Planning AUTHOR(S): California Division of Mines and Geology SOURCE: California Geology, California Divisions of Mines and Geology, Sacramento, CA, pages 242-244 DATE: 10/01/73 ABSTRACT: The California Division of Mines and Geology and Sonoma County

entered into a cooperative agreement to study the nature and extent of geologic factors that could affect land use and deve- lopment along the Sonoma County coastline. The results of this study were published by the Division in Preliminary Report No. 16, "Geology for Planning on the Sonoma County Coast, between the Russian and Gualala Rivers", by Michael E. Huffman. Bedrock and surficial geology maps, at a scale of 1:24,000, depict rock types, faults, old and recently active landslides, and similar data. Interpretive maps, at the same scale, evaluate slope stability, and seismic risk. The text, written for both the professional earth scientist and the non-geologist, KEYWORDS: Geomorphology, Socioeconomics coastal erosion, geology, geomorphic processes, institutions/planning/mgmt., maps, neotectonics California, Subregion II Water Quality Control Policy for Mendocino Coast AUTHOR(S): California N. Coast Reg. Water Quality Cont. Board SOURCE: California North Coast Regional Water Quality Control Board/The Resources Agency, Sacramento, CA DATE: 04/01/67 ABSTRACT: The water quality objectives developed in this report are designed to act as a set of principles for a long-range water quality management program on the Mendocino County Coast. Maps are included. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., maps California, Subregion II, Ten Mile River Cell, S. Ten Mile River Reach, Navarro River Cell Comprehensive Framework Study-California Region: Appendix XVI, Shoreline Protection and Development AUTHOR(S): California Region Framework Study Committee SOURCE: Pacific Southwest Inter-Agency Committee, Water Resources Council pages, Water Resources Abstracts, Minneapolis, MN: Environmental Hydrology Corp (142452 W80-02035) DATE: 06/01/71 ABSTRACT: This appendix is part of a larger study undertaken to evaluate alternative water and related land resources for the California Region, an area consisting of California and 7% of Oregon. The appendix presents an evaluation and planning proposals for shoreline protection and development in the region.

A descrip- tion of the region is presented. A regional summary of needs is followed by a more detailed analysis of shore-line data from the region's 11 subregions. Structural measures considered to protect the shoreline emphasize the urban and public recreation areas being threatened with critical erosion. Proposed KEYWORDS: Coastal Processes, Socioeconomics beaches, coastal erosion, coastal structures, institutions/planning/mgmt., shoreline use, shore protection California, Oregon, Subregion I, Subregion II, Subregion III, Subregion IV, California and the Ocean AUTHOR(S): California Resources Agency SOURCE: California, The Resources Agency, Sacramento, CA, 179 pages DATE: 12/01/66 ABSTRACT: Evaluation of the uses of the Pacific Ocean to include: recreation, habitat, petroleum and mineral extraction. KEYWORDS: Socioeconomics beaches, coastal structures, mining, population, shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V California Comprehensive Ocean Area Plan Background AUTHOR(S): California Resources Agency; COAP Development Program SOURCE: California Resources Agency, Department of Navigation and Ocean Development, Sacramento, CA, COAP Development Program DATE: 10/01/70 ABSTRACT: Study pertaining to the development and conservation of California's coastal zone. The background of this coastal planning effort, including history, and administrative framework and planning criteria is included. KEYWORDS: Socioeconomics institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V EeL and Mad River Basins, Master Plan Hydrology AUTHOR(S): California State Federal Inter-Agency Group SOURCE: California State Federal Inter-Agency group., Sacramento, CA, 99 pages DATE: 08/01/69 ABSTRACT: This report presents tabulations of estimated unimpaired runoff for the 56-year period from 1911 to 1966 at gaging stations and damsites within the Eel and Mad River Basins. These data are the result of a detailed reevaluation of surface runoff within the basins, superseding runoff estimates of previous studies cited in chapter 1. The scope of this study is limited to longterm

surface runoff estimates, with no consideration of flood hydrology, flow duration, or water requirements. Detailed dis- cussions of these parameters can be found in the Bulletin No. 136 office report, "Project Hydrology", and in Bulletin No. 142-1. KEYWORDS: Hydrology & Hydraulics river discharge, stream gaging, watersheds California, Subregion I, Eureka Cell A Program for Managing the Ocean and Tidal Areas AUTHOR(S): California State Lands Commission SOURCE: Supplementary Report of the Committee on Conference, Relating to the 1970 Budget Act, California Statelands Commission, Sacramento, CA, 62 pages DATE: 12/01/70 ABSTRACT: Presents the program for the ocean and tidal land management in California to include administration for a land use plan encouraging multiple use development of ocean, tidal, and submerged areas while conserving irreplaceable lands, location of precise ocean, tidal, and submerged boundaries, and maintenance program. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., mining, property value/land use, shoreline use California, Subregion I, Subregion II, An Index to Historical Hydrographic and Topographic Charts of the California Coast AUTHOR(S): California State Lands Commission SOURCE: California State Lands Commission, Sacramento, CA, 97 Pages DATE: 10/01/79 ABSTRACT: In 1971 the California State Lands Commission began an acquisi- tion of negative film copies of most of the historical topographic and hydrographic charts along the California coast. These charts were collected and compiled to aid the staff of the Commission in studies of the historical water lines and water levels within the bays and the off-shore zone along the California coast. KEYWORDS: Survey hydrographic surveys, maps, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Final Report to the Legislature by the Senate Interim Committee on Beach Erosion AUTHOR(S): California State Legislature SOURCE: California Senate, Sacramento, CA, Senate Resolution Number 39, 85 pages

DATE: 01/01/55 ABSTRACT: A report on beach erosion and related problems. KEYWORDS: Geomorphology, Socioeconomics coastal erosion, coastal erosion problems, institutions/planning/mgmt. California, Subregion I, Subregion II, Subregion IVI, Subregion IV Final Report to the Legislature by the Senate Interim Committee on Stream and Beach Erosion AUTHOR(S): California State Legislature SOURCE: California State Senate, Sacramento, CA, 164 pages DATE: 01/01/57 ABSTRACT: Report discusses the erosion of beaches and streams in relation to major impact on both recreation and economics. The Committee on Stream and Beach Erosion was authorized to ascertain, study, and analyze all facts relating to the erosion of involved banks. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Socioeconomics beaches, coastal erosion, institutions/planning/mgmt., shoreline changes, watershed sediment California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Transcript of Proceedings, Hearing of the Subcommittee on Con-servation of the Assembly Committee on Natural Resources Plann- ing and Public works AUTHOR(S): California State Legislature SOURCE: California Assembly Committee on Natural Resources Planning and Public Works, Sacramento, CA, Sumcommittee on Conservation, 192 pages DATE: 01/21/66 ABSTRACT: A transcript of a subcommittee hearing on California beach erosion problems, specifically centered in Capitola. Various factors are discussed, including coastal structures, upstream flood control projects, wave action and littoral transport. KEYWORDS: Coastal Processes, Hydrology & Hydraulics beaches, coastal erosion problems, coastal structures, littoral sediment, longshore transport, river-bed sediment California, Subregion IV, Santa Cruz Cell Legislative Counsel's Digest AUTHOR(S): California State Legislature SOURCE: California State Senate, Sacramento, CA, Bill #1277, 97 pages DATE: 06/19/75 ABSTRACT: An act to add Division 20 to, and to amend Sections 4551.5, 25103, 25302, 25500, 25507, 25508, 25514, 25519, 25523, & 25526 of, and to add Section 25516.1, etc. This bill would enact the California Coastal Act of 1976, declare

legislative related findings, prescribe policies of the state with regard to public access, recreation, marine environment, and industrial development. It would also revise existing laws and provide for critical review in cases that involve California's coastal environment. KEYWORDS: Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V Shoreline Erosion AUTHOR(S): California State Legislature SOURCE: California Senate Office of Research, Sacramento, CA DATE: 11/01/84 ABSTRACT: Estimates the public costs associated with shoreline protection and erosion damage. KEYWORDS: Socioeconomics coastal erosion problems, growth potential/recreation, institutions/planning/mgmt., property value/land use, shore protection, storm damage California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V An Oceanographic Study Between the Point of Trinidad Head & the Eel River. Annual Report, 1960 for the California Water Pol- lution Control Board AUTHOR(S): California State University at Humboldt SOURCE: California State University, Humboldt, CA, maps, tables, diagrams DATE: 10/01/60 ABSTRACT: This annual report presented under a standard agreement between Humboldt State and the California Water Pollution Control Board, covers findings on the oceanography of the near-shore waters between Trinidad Head and the Eel River. Findings are presented under the following headings: Overlying waters-physical and chemical properties, biological properties, ocean currents, benthos, and food for fish. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, coastal currents, environmental constraints, nearshore currents California, Subregion I, Eureka Cell An Oceanographic Study Between the Points of Trinidad Head and the Eel River AUTHOR(S): California State University at Humboldt SOURCE: California Water Pollution Control Board, Sacramento, CA, 5 volumes DATE: 01/01/62

ABSTRACT: Study includes research concerning waste disposal in the marine environment. Objectives of the study were to describe the biological, chemical, and physical aspects of the near-shore areas. Also reported and observed were ocean currents, razor clam studies, other wildlife, and wind currents. Tables, photos, and graphs available. Study period includes 1958-1962. KEYWORDS: Oceanography & Meteorology, Socioeconomics institutions/planning/mgmt., nearshore currents, wind California, Subregion I, Eureka Cell Proposed Coastal Zone Management: A Seminar AUTHOR(S): California State University at Humboldt SOURCE: California State University, Humboldt, CA, Marine Advisory Extension Service, Sea Grant Program, pages 87 (HSC-SGI) DATE: 05/07/71 ABSTRACT: Seminar concerned with coastal zone management. State coastal planners, county supervisors, county planners, the news media, conservation organizations & industry, and a congressman were involved. Topics included coastal zone planning, local government on coastal zone management, and public reaction to coastal zone management. KEYWORDS: Socioeconomics institutions/planning/mgmt., shoreline use, shore protection California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V An Oceanographic Study Between the Point of Trinidad Head and the Eel River; Final Project Report 1958-1962 AUTHOR(S): California Water Quality Control Board California Water Quality Control Board, Sacramento, CA, SOURCE: California Resources Agency, Pulication Number 25, 135 pages, maps, tables DATE: 01/01/64 ABSTRACT: This report attempts to quantitatively and qualitatively find measurement factors used to characterize the marine environment of the study The data includes physical and chemical properties and biological area. properties of the water column and of the ocean floor. Most data were gathered within 5 miles of shore. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey climatology, coastal currents, environmental constraints, hydrographic surveys, California, Subregion I, Eureka Cell Floods of California, 1950 AUTHOR(S): California Water Resources Board SOURCE: California Water Resources Board, Sacramento, CA, 1 volume, photos

DATE: 01/01/51 ABSTRACT: This is a pictorial record of the widespread and destructive floods of 1950 in California. Rainfall near record intensity extended roughly from the latitude of Marysville in the Sacra- mento Valley to the latitude of Bakersfield in the San Joaquin Valley. Record high run-off figures were established on many of the Sierra Nevada streams in the area and floods of major proportion resulted. It has been estimated that between 350,000 to 400,000 acres of land were flooded and damages are estimated in excess of \$32,000,000. KEYWORDS: Hydrology & Hydraulics precipitation, storm damage, storms/floods, watersheds California, Subregion II, Subregion III, Subregion IV, Subregion V, Subregion VI Floods of California; 1955 AUTHOR(S): California Water Resources Board SOURCE: California Water Resources Board, Sacramento, CA, 1 Volume, photos DATE: 03/01/56 ABSTRACT: This is a pictorial record of the widespread and destructive floods of 1955 in California. During the week preceding Christmas 1955, northern and central California was subjected to the greatest flood in the area's history. The intense flood-producing precipitation covered an area of about 100,000 square miles, which represents over 60 percent of the gross area of the State. KEYWORDS: Hydrology & Hydraulics precipitation, storm damage, storms/floods, watersheds California, Subregion II, Subregion III, Subregion IV, Subregion V Index for Ground Photographs for Various Pacific Coast Beaches AUTHOR(S): California, University of SOURCE: University of California, Berkeley, College of Engineering, 3 leaves (Its HE-116-72) DATE: 09/02/45 ABSTRACT: This is an index for ground photographs for various Pacific Coast beaches. It includes sheet number, photo numbers, topic, date, and volume. For example, surf at Point Reyes, July 20, 1944. Field trip to Humboldt Bay, August 26, 1944 are included in the photos. KEYWORDS: Survey beaches California, Subregion I, Subregion II, Subregion IV, Subregion V

Sortie Record of Aerial Photographs along the California Coast AUTHOR(S): California, University of

SOURCE: University of California, Berkeley, 24 pages, typed paper, Hydraulic Engineering Laboratory DATE: 01/01/50 ABSTRACT: A record of the negative size, title, exposure, and location of the pictures. Some are of wave depth, and table bluffs. KEYWORDS: Survey aerial photography California, Subregion I, Subregion II, Subregion IV, Subregion V Aerial Photos of Pacific Coast, USA Sortie Records, Data Book 442 AUTHOR(S): California, University of SOURCE: University of California, Berkeley, Hydraulic Laboratory, O'Brien Hall, 24 pages, typed paper DATE: 01/01/50 ABSTRACT: A record of the negative size, title, exposure and date of the photos. Some are of wave depth, table bluffs. Time peroid 1944-1949. KEYWORDS: Survey aerial photography California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Inshore Survey, San Francisco Bay: Sediment Study AUTHOR(S): California, University of SOURCE: University of California, Berkeley, Institute of Engineering Research, Series No. 57, Issue No. 2, October 1954 DATE: 10/01/54 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology grain size, littoral sediment California, Subregion III, San Francisco Cell Financing Coastal Plan Implementation AUTHOR(S): California, University of SOURCE: University of California, Berkeley, 72 pages, illustrations, tables, available at Water Resources Archives DATE: 01/01/75 ABSTRACT: Purpose of the report was to estimate overall requirements for coastal plan implementation and to identify potential sources of financing. Other purposes included: identification of inter- jurisdictional revenues, expenditure problems related to coastal conservation and management, assessment of how state and local fiscal policies can contribute to coastal policies and evalu- ation of methods for financing coastal related activities. KEYWORDS: Socioeconomics institutions/planning/mgmt.

California, Subregion I, Subregion II, Subregion IV, Subregion V Proposed Master Plan of Beaches, Parks and Recreation, Humboldt County, California AUTHOR(S): Campbell, James M. SOURCE: Humboldt County Planning Commission, Humbolt County, CA, 37 pages DATE: 06/01/51 ABSTRACT: This plan was designed to protect and develop recreation in Humboldt County. Included a program of acquisition and development. Includes maps. KEYWORDS: Socioeconomics beaches, coastal structures, growth potential/recreation, institutions/planning/mgmt., maps, urbanization California, Subregion I, Eureka Cell, S. Eureka Reach, Mattole River Cell Geology and Ground Water in Russian River Valley Areas and in Round, Laytonville, and Little Lake Valleys, Sonoma and Mendocino Counties, CA AUTHOR(S): Cardwell, G. T. U.S. Geological Survey, Water-Supply Paper 1548, p. 154 SOURCE: DATE: 01/01/65 This report provides fundamental geologic and hydrologic ABSTRACT: information about 10 valleys in Sonoma and Mendocino Counties, California. The study area includes seven valleys along the 110 mile course of the Russian River in Sonoma and Mendocino Counties and three valleys in the upper drainage basin of the Eel River in Mendocino County. Coastal information is given for the Russian River only. KEYWORDS: Geomorphology, Hydrology & Hydraulics geology, maps, precipitation, river discharge, stream gaging California, Subregion II, Russian River Cell Principal Sources and Dispersal Patterns of Suspended Particulate Matter in Nearshore Surface Waters of the Northeast Pacific Ocean AUTHOR(S): Carlson, P. R.; Janda, Richard J. SOURCE: U.S. Geological Survey, Menlo Park, CA, 12 pages, Report No. NASA-CR-136325 DATE: 11/01/73 The Release-recovery paths of drift cards released in con-ABSTRACT: junction with ERTS-1 overflight show that nearshore surface currents along the central and northern California coast flowed southward at an average rate in excess of 10 cm/sec (8.5 km/day) during August and September 1973 (California Current). By the middle of October 1973, the nearshore surface currents had reversed and the dominant flow velocity was northward at an average rate in excess of 20

cm/sec (17 km/day) (Davidson Current). August--September data suggested the presence of counterclockwise gyres in Monterey Bay and the KEYWORDS: Coastal Processes, Oceanography & Meteorology aerial photography, coastal currents, longshore transport, nearshore currents, remote sensing, river sediment discharge California, Subregion I, Subregion II, Subregion IV, Subregion V, Santa Cruz Cell, S. Monterey Bay Cell Aerial Observations of Suspended-Sediment Plumes in San Francisco Bay and the Adjacent Pacific Ocean AUTHOR(S): Carlson, P. R.; McCulloch, D. S. SOURCE: U. S. Geological Survey Journal Research, V. 2, No. 5, p. 519-526 DATE: 01/01/74 Aerial observations of suspended-sediment patterns in the San ABSTRACT: Francisco Bay estuary system, together with shipboard water- property measurements, show that a plume of highly turbid, low- salinity water associated with the Sacramento-San Joaquin River system bifurcates in the central bay. During a winter storm period when Sacramento-San Joaquin discharge was about 7800 cu. m/s, one lobe of the plume flowed 15 km south of the San Francisco-Oakland Bay Bridge while the main lobe flowed seaward 30 km, covering an area of about 900 sq. km. Salinity differences of 1-2 parts per thousand and light transmission differences of KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Oceanography & Meteorology estuarine sediment storage, offshore/onshore transport, remote sensing, river discharge, river sediment discharge California, Subregion III, Bolinas Bay Cell, San Francisco Cell ERTS Observations of Surface Currents Along the Pacific Coast of the United States AUTHOR(S): Carlson, P. R.; Harden, D. R. SOURCE: Chap. 9 in Carlson and others, eds., Principal sources and dispersal patterns of suspended particulate matter in nearshore surface waters of the northeast Pacific Ocean, ERTS Final Report DATE: 01/01/75 ABSTRACT: ERTS imagery and drift card returns are an effective means of monitoring directions of nearshore, near-surface oceanic currents. Along the Pacific coast the surface currents flow southward (California Current) most of the year (March - October). In the fall (October - November), possibly as a result of a shift in the principal wind direction, the nearshore surface

currents reverse and begin to flow northward (Davidson Current) until late winter or spring (February - March) when the currents again reverse and southerly flow dominates. The imagery also provides a synoptic view of river KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Oceanography & Meteorology coastal currents, grain size, remote sensing, river sediment discharge, sedimentation, wind California, Subregion I, Subregion II, Subregion IV Distribution, Abundance, and Composition of Suspended Particles in the San Francisco Bay System, April and July 1973 AUTHOR(S): Carlson, P. R.; Conomos, T. J.; Knebel, H. J. SOURCE: Chap. 7 in Carlson and others, eds., Principal sources and dispersal patterns of suspended particulate matter in nearshore surface waters of the northeast Pacific Ocean, ERTS Final Report DATE: 01/01/75 ABSTRACT: The distribution, abundance, and composition of suspended particles in the near-surface waters of the San Francisco Bay system were studied in April and July 1973. The following aspects of suspended matter were investigated: (1) the concentrations of suspended particles in near-surface waters with emphasis on the temporal and spatial distribution as related to water properties and structure, (2) the bulk clay mineral composition of the lithogenic fraction of the near- surface suspended particles, and (3) the species composition and cell numbers of phytoplankton in near-surface waters. KEYWORDS: Coastal Processes, Geomorphology estuarine sediment storage, petrology, remote sensing, river sediment discharge, sedimentation California, Subregion III, Bolinas Bay Cell, San Francisco Cell Recent Marine Sediments of Carmel Bay, California AUTHOR(S): Carter, L. S. SOURCE: U.S. Naval Postgraduate School, Monterey, California, Master's Thesis, 57 pages, Water Resources Abstracts (055228 W73-05796), Minneapolis, MN: Environmental Hydrology Corporation DATE: 12/01/71 ABSTRACT: Fifty-six sediment samples were collected within Carmel Bay, California, for textural analysis. The sediments within the Carmel submarine canyon consist, for the most part, of poorly to very poorly sorted very fine sand and coarse silt. The shelf area surrounding the canyon is primarily comprised of moderately to very poorly sorted sand, with a small area of verv poorly sorted gravel in the northeastern section of the bay. Movement of

sediments by slumping and gravity sliding down the Carmel Submarine Canyon appears to be the only form of sediment removal within the bay. KEYWORDS: Coastal Processes, Geomorphology geology, grain size, sedimentation, submarine canyons California, Subregion IV, S. Monterey Bay Cell, Carmel River Cell Ocean Current Circulation off Monterey, California AUTHOR(S): Carter, Ralf C. SOURCE: University of California, Berkeley, Department of Civil Engineering, Ocean Engineering, CE 201A, term paper, 15 pages, illustrations DATE: 12/09/67 ABSTRACT: A literature review of the marine climate and water circulation within Monterey Bay. Three distinct marine seasons are described and the different current patterns that are produced within Monterey Bay as a result of the seasonal changes are investigated. The factors affecting the Davidson Current are reviewed and information that supports the geostraphic flow explanation for the current are presented. KEYWORDS: Oceanography & Meteorology coastal currents, nearshore currents California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Cation Exchange Capacity of Suspended Material From Coastal Sea Water Off Central California AUTHOR(S): Carter, Ralf C.; Wilde, Pat SOURCE: University of California, Berkeley, Institution of Marine Resources. Marine Geology, Volume 13, No. 2, pages 107-122, Water Resources Abstracts (050270 W73-00599) DATE: 09/01/72 ABSTRACT: The Methylene Blue Method for the determination of cation exchange capacity (CEC) of suspended material in sea water is sensitive for values between 0.1 and 10.0 microequivalents per litter. Several nearshore sea water samples along the central California coastline contained 1 to more than 6 microequivalents per liter. At best this method gives an apparent CEC determined not only by organic, Clay-Organic, and clay particles, but also by methylene blue absorbed on the particles. KEYWORDS: Coastal Processes, Oceanography & Meteorology geomorphic processes, sedimentation California, Subregion III, Subregion IV, Subregion V Physical Dynamics of Arcata Bay AUTHOR(S): Casebier, Thomas A.; Lawrence, J. Toimil SOURCE: Humboldt State University, Arcata, CA, in fulfillment of directed study requirements, Robert Thompson, Advisor, Spring 73 DATE: 05/01/73

ABSTRACT: Investigation of the physical parameters of the circulation dynamics within Arcata Bay. The oscilatory tidal motion, establishing hydraulic gradients, is seen as the dominant factor governing transport flow. Measurable modification of vector flow is seen being induced by the extensive mudflat bathymetry of the estuary. A numerical method for predicting current velocities is applied. Salinity distribution of the Arcata Bay- Somona Channel System is recorded. Salinity is generally shown to be a function of open ocean conditions, Elk River flow and drainage carried directly into the Bay by а complex system of streams and canals. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology coastal currents, estuarine sediment storage, river discharge, tides California, Subregion I, Eureka Cell Longshore Sand Transport Report, February 1978 through December 1981, Coastal Data Information Program AUTHOR(S): Castel, David; Seymour, R. Scripps Institution of Oceanography, La Jolla, CA, IMR SOURCE: Reference No. 86-Z (reprint), prepared for USACE and California Department of Boating and Waterways DATE: 03/01/86 ABSTRACT: The Coastal Data Information Program (CDIP) network collects wave and other coastal data automatically over ordinary telephone lines through a central computer controlled station at La Jolla, CA. Among the stations monitored are a number of nearshore directional arrays that provide information on wave intensity and direction beyond the break point in shallow water, can be used to infer the probable direction and quantity of sediment which is moved alongshore by the waves. This publication contains four annual reports on the potential sand transport statistics from directional wave array stations KEYWORDS: Coastal Processes, Oceanography & Meteorology longshore transport, wave climate California, Subregion I, Subregion III, Subregion IV, Klamath River Cell, Bolinas Bay Cell, San Francisco Cell, Santa Cruz Cell Near-Bottom Currents in Monterey Submarine Canyon and on the Adjacent Shelf AUTHOR(S): Caster, William A. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis DATE: 01/01/69 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents, submarine canyons

California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Geology: Part of a Study of the California Coastal Zone AUTHOR(S): Central Coast Regional Commission, Santa Cruz SOURCE: California Coastal Zone Conservation Commission, San Francisco, CA, 33 leaves, illustrations, maps DATE: 04/01/74 ABSTRACT: This is a report of coastal geology and geological hazards; cliff stability, shoreline erosion, beach erosion, tsunamis, slope stability, landslides, and seismic activity. The area of study is the central coast region. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, coastal erosion problems, geology, maps, shoreline changes, tsunamis California, Subregion III, Subregion IV, Subregion V A Study of the Effects of the San Francisco Oil Spill on Marine Organisms, Part Ι AUTHOR(S): Chan, Gordon L. SOURCE: Unpublished Paper, College of Marin, Kentfield, California DATE: 01/01/72 The oil spill occurred on January 18, 1971, during the early ABSTRACT: morning hours when two Standard Oil vessels collided almost directly under the Golden Gate Bridge, releasing 840,000 gallons of Bunker C fuel. This asphaltlike oil was washed up on intertidal shores of the area. KEYWORDS: Coastal Processes coastal currents, environmental constraints, tides California, Subregion III, San Francisco Cell Recent History of California Current Living Resources AUTHOR(S): Chapman, W. M. California Fish and Game Commission, Sacramento, CA, 15 pages SOURCE: DATE: 08/26/66 This is a statement made before the California Fish and Game ABSTRACT: Commission regarding the anchovy fisheries, anchovy population size, biological research, impact of fishery on environment and sport fishing, and its regulation for maximum use and conservation of the resource. KEYWORDS: Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt. California, Subregion III, Subregion IV, Bolinas Bay Cell, San Francisco Cell, S. Monterey Bay Cell

Oceanographic Data of the Monterey Deep Sea Fan AUTHOR(S): Chase, T. E.; Normark, W. R.; Wilde, Pat

SOURCE: University of California, Berkeley, First Edition, IMR Tech Report Series TR-58 DATE: 06/01/75 ABSTRACT: Chart that summarizes oceanographic data. Can be used as a planning document for cruises, and a working chart during shipboard operations. Includes geologic features, seismic refraction and coastal refraction surveys. KEYWORDS: Geomorphology, Oceanography & Meteorology, Survey geology, hydrographic surveys, maps, sedimentation, wave transformation California, Subregion IV, Subregion V, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Wave and Surge Conditions after Proposed Expansion of Monterey Harbor Monterey, California: Hydraulic Model Investigation AUTHOR(S): Chatham, Claude E., Jr. USACE, Waterways Experiment Station, Vicksburg, MS, Report No. SOURCE: AEWES-TR-H-68-9, 125 pages DATE: 09/01/68 ABSTRACT: A 1:120-scale model at Monterey Harbor, California, was used to investigate the arrangement and design of certain proposed harbor improvements with respect to wave and surge action and to determine current conditions in the navigation entrances to the harbor and its basins. A 56-ft.-long wave machine and electrical wave height measuring and recording apparatus were utilized in model operation. Base tests were conducted with existing prototype conditions installed in the model. Results of tests involving the various improvement plans were compared with base test results to determine the relative effectiveness of various plans. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal structures, storm surge, storm waves, wave climate, wave transformation California, Subregion IV, S. Monterey Bay Cell Design for Expansion of Port San Luis, California AUTHOR(S): Chatham, Claude E., Jr.; Brasfeild, C.W. SOURCE: USACE, Waterways Experiment Station, Vicksberg, MS, Technical Report No. HL 69-6, 22 pages and figures DATE: 04/01/69 ABSTRACT: A 1:100-scale model of Port San Luis (formerly known as San Luis Obispo Harbor), California, was used to investtigate the arrangement and design of certain proposed harbor improvements with respect to wave action. A 60-ft-long wave machine and electrical wave height measuring and recording

apparatus were utilized in model operation. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal structures, shore protection, storm surge, storm waves, wave climate, wave transformation California, Subregion VI, Morro Bay Cell Low Frequency Sea Level Variability Along the West Coast of Northern America AUTHOR(S): Chelton, Dudley B., Jr. SOURCE: University of California at San Diego, La Jolla, CA, Ph.D. Thesis in Oceanography, 212 pages DATE: 01/01/80 ABSTRACT: The use of linear statistical estimators to examine dynamical models is discussed and the importance of using multiple input statistical models rather than a series of single input models is emphasized. A methodology is described for determining the effects of statistical uncertainty in both time and frequency domain multiple input statistical models. These methods are then used to examine 30 years of nonseasonal tide gauge and steric sea level data along the west coast of North America. The objective is to explore the nature and causes of nearshore oceanic variability over short term climatic time scales of months to years. KEYWORDS: Coastal Processes, Oceanography & Meteorology beach profiles, hydrographic surveys, sea level change, tides, wind California, Subregion I, Subregion III, S. Smith River Reach, Klamath River Cell, San Francisco Cell Large-Scale Response of the California Current to Forcing by the Wind Stress Curl AUTHOR(S): Chelton, Dudley B., Jr. Jet Propulsion Laboratory, California Institution Technology, SOURCE: Pasadena, CA, 91109, Report CCDFF Vol. 23, pages 130-148 DATE: 01/01/82 ABSTRACT: Seasonal distributions of zooplankton volume in the California current show a maximum at a distance of about 100 km offshore between San Francisco and northern Baja California. It is shown that this coincides with a region of offshore upwelling of the thermocline associated with a nearshore counterflow. KEYWORDS: Oceanography & Meteorology coastal currents, nearshore currents, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V, Subregion VI, Subregion VII

Tsunami Propagation and Response to Coastal Areas AUTHOR(S): Chen, M. H. SOURCE: Hawaii Institute of Geophysics, Honolulu, HI, Report HIG-73-15, NOAA-JTRE-95, 83 Pages, Water Resources Abstracts, (078924 W75-00480) DATE: 12/01/73 ABSTRACT: A suitable boundary condition equivalent to the matched impedance boundary condition in acoustic radiation is adapted to describe the open sea boundary where the wave is assumed to be totally transmitted. A numerical model is used to solve the time-harmonic steady-state problem such as a periodic long wave impinging upon a circular island with uniform water depth. Good agreement is found between the predicted and analytic solutions of the wave amplitude at the shoreline of the island. The destructive tsunami that resulted from the 1964 Alaska earthquake is simulated by a numerical code in spherical coordinates. In general, the predicted first arrival time is approx-KEYWORDS: Oceanography & Meteorology tsunamis, wave climate California, Subregion I, S. Smith River Reach, Klamath River Cell Sand Movement along a Portion of the Northern California Coast AUTHOR(S): Cherry, John A. SOURCE: University of California, Berkeley, Technical Report, Series HEL-4-3, 150 pages DATE: 04/01/64 ABSTRACT: The long-term beach and offshore sand movement along the portion of the Northern California coast between Drakes Bay and the Russian River was studied. Analysis of hindcast swell data availability of sand for transport, refraction diagrams and knowledge of stable shapes of sedimentary coastlines suggested that under present conditions little net longshore movement of sand occurs in the area and that the beaches are generally in equilibrium with negligible supply or loss of sand. Surface sediment samples were collected from beaches and offshore zones. Twelve sedimentary petrologic provinces were outlined on the basis of the patterns of heavy mineral distribution. KEYWORDS: Coastal Processes grain size, littoral sediment, longshore transport, petrology, shoreline changes, wave climate California, Subregion II, Subregion III, Russian River Cell, Bodega Bay Cell, Point Reyes Cell, S. Point Reyes Reach, Drakes Bay Cell Sand Movement Near Point Reyes, California AUTHOR(S): Cherry, John A.

SOURCE: Shore and Beach, American Shore and Beach Preservation Association, O'Brien Hall, University of California, Berkeley, CA, 5 pages, Figures, Tables DATE: 04/01/65 ABSTRACT: The heavy mineral and grain size characteristics of the beach and offshore sand near Point Reyes, California, indicate that very little net sand movement occurs along the beaches in the area. In effect, Point Reyes acts as a barrier to littoral sand transport. A wave refraction analysis shows that the predomi- nant ocean swell breaks essentially parallel to the beaches near Point Reyes. KEYWORDS: Coastal Processes, Survey beaches, grain size, littoral sediment, longshore transport, petrology, wave transformation California, Subregion II, Subregion III, Sand Movement Along a Portion of the Northern California Coast AUTHOR(S): Cherry, John A. SOURCE: USACE, Coastal Engineering Research Center, Washington, D.C., Report No. TM-14, 129 pages (AD-628 866) DATE: 10/01/65 ABSTRACT: Long-term beach and offshore sand movement along the northern California coast between Drakes Bay and Russian River was studied. Analysis of wave, sand, and geological data, along with known configurations and behavioral processes of stable beaches, suggests little net alongshore movement under present conditions. This analysis is confirmed through heavy mineral analysis of surface samples. Surface sediment samples were collected from beaches and offshore zones. Twelve sedimentary petrologic provinces were outlined on the basis of the patterns of heavy mineral distribution. Point Reyes and Bodega Head are indicated to be effective littoral barriers to alongshore transport. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment, longshore transport, petrology, wave climate California, Subregion II, Subregion III, Russian River Cell, Bodega Bay Cell, Point Reyes Cell, S. Point Reyes Reach, Drakes Bay Cell Sand Movement Along Equilibrium Beaches North of San Francisco AUTHOR(S): Cherry, John A. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory;

Journal of Sedimentary Petrology, Lawrence, Kansas: Allen Press, Volume 36, No. 2, pages 341-357, DATE: 06/01/66 ABSTRACT: Many sandy shorelines along open coasts have relatively permanent configurations which often are the result of an equilibrium adjustment between the predominant swell waves, the predominant conditions of littoral sand movement and the rate of sand supply. The sand movement along several stretches of equilibrium shoreline near Point Reyes was studied using two methods: (1)Common techniques of tracing heavy minerals and (2) theoretical predictions based on swell data and diagrams of wave travel in shallow water. Patterns of heavy mineral distri- bution in the beach and offshore sands established that neglig- ible net movement of sand occurs along the beaches and that no KEYWORDS: Coastal Processes, Oceanography & Meteorology beaches, littoral sediment, longshore transport, petrology, shoreline changes, wave transformation California, Subregion II, Subregion III, Point Reyes Cell, S. Point Reyes Reach, Drakes Bay Cell Industry and the California Coast, A Survey Report AUTHOR(S): Chew, Herman F.; Davis, Stuart SOURCE: University of Southern California, Los Angeles, CA, Research Institute For Business and Economics, National Sea Grant College Program, Rockville, MD, 35 pages, USG-SG-3-71 DATE: 06/01/71 ABSTRACT: To determine if any recognizable trends could be established regarding utilization of the ocean or land along the California coast during the next ten years, questionnaires were mailed to 1,674 organizations. This survey was conducted by the University of Southern California Research Institute for Business and Economics in support of the US National Sea Grant Program. The Grant utilizes a multidisciplinary approach to enhancing national resources in marine related activities through involvement of institutions of higher learning in areas of education, research, and advisory services. KEYWORDS: Socioeconomics growth potential/recreation, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V, Subregion VI, Subregion VII

Coastal Sand Dune Complexes: Pismo Beach and Monterey Bay

AUTHOR(S): Chipping, David H.; Mc Coy, Randy SOURCE: California Geology, (A publication of California Division of Mines and Geology, Sacramento, CA,), Volume 35, No. 1, January 1982, pages 7-12, photos, diagrams DATE: 01/01/82 ABSTRACT: Extensive coastal sand dune complexes are relatively rare in California. Two examples of this kind of geological environment are Monterey Bay Sand Dunes located along the southern edge of Monterey Bay and the Pismo Beach Sand Dunes. The preservation of these sand dunes is important to both biologists and geolo- gists. During this current study on ecosystems, aerial photo- graphs taken over wide intervals of time were examined. From these photos, it was apparent that increasing off-road vehicle usage in the sand dune complexes has affected the dunes at both study areas. KEYWORDS: Geomorphology, Socioeconomics aerial photography, coastal erosion, dunes, environmental constraints, shoreline use California, Subregion IV, S. Monterey Bay Cell Preliminary Geologic Map of the Monterey and Seaside, 7.5-Minute Quadrangles, Monterey County, California, with Emphasis on Active Faults AUTHOR(S): Clark, J. C.; Dibblee, T. W., Jr.; Green, H. G.; Bowen, O. E. SOURCE: U.S. Geological Survey Miscellaneous Field Studies Map MF-577, Scale 1:24,000, 2 sheets DATE: 01/01/74 A 1:24,000 scale, black-and-white, geologic map covering the ABSTRACT: coastline from Point Lobos to Seaside. Holocene (younger than 10,000 years old) deposits are mapped in 9 units, including a unit of beach sands. Onehalf of the second sheet is text describing the major faults in the map area. KEYWORDS: Geomorphology, Survey beaches, cliff sediment, geology, maps, neotectonics California, Subregion IV, Subregion V, Stratigraphy, Paleontology, and Geology of the Central Santa Cruz Mountains, California Coast Ranges AUTHOR(S): Clark, J. C. SOURCE: U.S. Geological Survey Professional Paper 1168, p. 51 DATE: 01/01/81 ABSTRACT: This paper describes the petrology, stratigraphy, paleontology, inferred age, and depositional environment of the rock forma- tions of the central Santa Cruz Mountains. The aerial distribu- tion of the formations is

shown on a 1:24,000 scale geologic map which covers the coastline from Santa Cruz Yacht Harbor to Point Ano Nuevo. KEYWORDS: Geomorphology cliff sediment, geology, geomorphic processes, maps, neotectonics, petrology California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell Contribution of Salinas River Sand to the Beaches of Monterey Bay, California, During the 1978 Flood Period, Fourier Grain- Shape Analysis AUTHOR(S): Clark, R. A.; Osborne, R. H. SOURCE: Union Oil Company of California, 376 South Valencia Street, Brea, CA, Journal of Sediment, Petrology Volumes 52, No. 3, pages 807-822, Oceanic Abstracts (83-00819), Bethesda, MD DATE: 01/01/82 ABSTRACT: Examination of medium-grained sand from southern Monterey Bay using Fourier grain-shape analysis and Q-mode multivariate techniques was performed to identify the contribution of sand from the Salinas River to the beaches along the bay following an episode of high stream discharge. Conventional textural and petrographic analyses also were used to aid in the interpret- ation of potential local sources for the sand in Monterey Bay. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, petrology, river discharge, California, Subregion IV, S. Monterey Bay Cell Landsliding in Marine Terrace Terrain, California AUTHOR(S): Cleveland, George B. SOURCE: California Division of Mines and Geology, Sacramento, CA, Special Report 119, pages 24 DATE: 01/01/75 ABSTRACT: A geomorphic study explaining the origin of landslides along stream courses based upon the premise that these landslides are related to stream development. In addition to analyzing other landslide mechanisms, slope stability evaluation in terrace terrain can be refined, by analyzing terrace evolution and drainage development with respect to relative sea level fluctuations. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics coastal erosion, geomorphic processes, sea level change, urbanization California, Subregion I, Subregion II, Subregion IV, Subregion V Rapid Erosion Along the Eel River, California AUTHOR(S): Cleveland, George B. SOURCE: California Geology, California Division of Mines and Geology,

Sacramento, CA, pages 204-211, photos

DATE: 09/01/77 ABSTRACT: This is a report on the rapid erosion along the Eel River. The nature of erosion and landsliding in the Hoxie crossing area are also discussed. KEYWORDS: Geomorphology, Hydrology & Hydraulics coastal erosion, geology, river-bed sediment, river discharge, river sediment discharge, watershed sediment California, Subregion I, Eureka Cell, S. Eureka Reach, Mattole River Cell, S. Mattole River Reach, Spanish Flat Cell The Road to Erosion AUTHOR(S): Coats, Robert N. SOURCE: Environment, Scientists Institute for Public Information, St. Louis, Missouri, 1978, Volume 20, No. 1 (January/February), 16 pages, Environmental Bibliography (0709949) DATE: 02/01/78 ABSTRACT: Not reviewed. KEYWORDS: Geomorphology coastal erosion, watersheds, watershed sediment California, Subregion I, Subregion II, Subregion III Landsliding, Channel Change, and Sediment Transport in Zayante Creek and the Lower San Lorenzo River AUTHOR(S): Coats, Robert N.; Collins, Laurel; Florsheim, Joan; Kautman, Darrell SOURCE: California Water Resources Control Board, Sacramento, CA, (a report to) DATE: 08/01/82 ABSTRACT: Concern about the possible effects of water resource development on acquatic habitat prompted the State Water Resources Control Board to undertake this study on instream flow requirements for sediment transport in Zavante Creek and the lower San Lorenzo River, Santa Cruz County, California. The approach of this study was to: (1) quantify certain aspects of a sediment budget for Zayante Creek, including sediment supply and transport, and (2) monitor changes in substrate and channel morphology in Zayante Creek and the lower San Lorenzo over the course of the winter season. A major aspect of the KEYWORDS: Hydrology & Hydraulics, Socioeconomics grain size, institutions/planning/mgmt., river-bed sediment, river sediment discharge, storms/floods, watershed sediment California, Subregion IV, Santa Cruz Cell Measurement of the California Countercurrent

AUTHOR(S): Coddington, Keith

SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 136 pages DATE: 06/01/79 ABSTRACT: Direct measurements by moored current meters and indirect measurements from geostrophy are compared and discussed for a region over the continental slope off central california during the Davidson Current period. During that same period, vertical temperature and salinity profiles were made at 23 stations on four separate cruises in the study area south of Monterey, california. These arrays of moored current meters simultaneously recorded the flow of the current at specified levels. The California countercurrent was found to be present in the region of study during the entire observation period. Its offshore position and extent, its intensity, and its vertical location and extent varied in a way largely consistent KEYWORDS: Oceanography & Meteorology coastal currents, longshore current, nearshore currents California, Subregion IV, S. Monterey Bay Cell, Carmel River Cell A Climatalogically - Based Analysis of the Storm and Flood History of Redwood Creek AUTHOR(S): Coghlan, Michael SOURCE: U.S. National Park Service, Redwood National Park, Crescent City, CA, Research and Development Technical Report 10, 47 pages DATE: 04/01/84 The study places the recent flood history of Redwood Creek in ABSTRACT: а long-term perspective and discusses the expected frequency of major storms and their associated flooding in north coastal California. KEYWORDS: Hydrology & Hydraulics, Socioeconomics climatology, environmental constraints, institutions/planning/mgmt., storms/floods, watersheds California, Subregion I, Klamath River Cell Sediments of the Submarine Canyons Off the California Coast AUTHOR(S): Cohee, George V. SOURCE: Journal of Sedimentary Petrology, Lawrence, Kansas: Allen Press, thru Oceanic Abstracts, Bethesda, MD, Vol 8, No. 1, Pages 19-33, Figures 1-10 DATE: 04/01/38 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology cliff sediment, geomorphic processes, littoral sediment, river-bed sediment, sedimentation, submarine canyons California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V, S. Monterey Bay Cell, Carmel River Cell

Recent Marine Sediments of the Central California Continental Shelf Between Point Lobos and Point Sur AUTHOR(S): Colomb, Herbert P., Jr. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 42 pages DATE: 03/01/73 ABSTRACT: Seventy sediment samples were collected from the continental shelf between Pt. Lobos and Pt. Sur for textural analysis to determine their properties. Based upon the parameters of mean grain-size and skewness, three distinct belts of sediment were found. Down the center of the shelf a discontinuous band of fine sand occurs in depths of 35 to 65 fm. The outer band appears to follow the break in the continental shelf and is composed of relatively coarse sediment. The primary source of sediments appears to be weathering of coastal rock formations, with sediment distribution due to wave action. (Author) KEYWORDS: Coastal Processes, Geomorphology geology, grain size, sedimentation, submarine canyons, wave climate California, Subregion IV, Subregion V, S. Carmel River Reach, Point Sur Cell Sources and Petrology of Beach Sand from Southern Monterey Bay, Calfornia AUTHOR(S): Combellick, Rodney A.; Osborne, Robert H. University of Southern California, Los Angeles, CA, 17 pages, SOURCE: Published in Journal of Sediment Petrology, Lawrence, Kansas: Allen Press. Volume 47, No. 2, Pages 861-907 (404284) DATE: 06/01/77 ABSTRACT: Considerable local and international demand exists for beach sand from Southern Monterey Bay, Ca. Uses of this specialty sand include filtration, sandblasting, foundry, and surface fin- ishes. Knowledge of the sand provenance provides a geologic basis for calculation of a new sand budget or reevaluation of available budgets to determine the degree to which beach sand mining contributes to coastal erosion in southern Monterey Bay. Comparisons were made of grain-size distributions, lithologic compositions, and grain surface attributes to deter- mine the provenance of medium- to coarse-grained beach sand. KEYWORDS: Coastal Processes, Geomorphology beaches, coastal erosion, geomorphic processes, grain size, mining, petrology California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell

Movement of Seabed Drifters in the San Francisco Bay Estuary and the Adjacent Pacific Ocean: A Preliminary Report AUTHOR(S): Conomos, T. J.; Peterson, D. H.; Carlson, P. R.; McCulloch, D. S. SOURCE: U.S. Geological Survey Circular 637-B, P. B1-B8 DATE: 01/01/70 ABSTRACT: 1345 seabed drifters were released during March 5-6, 1970 in San Francisco Bay and on the continental shelf within 90 kilo- meters of the Golden Gate to determine the near bottom water circulation pattern in the vicinity of the bay. All releases were made in water depths less than 180 m. (100 fathoms). By April 22, 1970, only 18 percent of the drifters had been recovered along shorelines. This report presents two figures showing the locations of release and recovery for the recovered seabed drifters. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, offshore/onshore transport California, Subregion III, Bolinas Bay Cell, San Francisco Cell Aquaculture and Coastal Zone Planning AUTHOR(S): Conte, Fred S.; Manus, Andrew T. SOURCE: University of California Cooperative Extension Sea Grant Marine Advisory Program, University of California Sea Grant Program, La Jolla, CA DATE: 01/01/82 ABSTRACT: This report reviews the status of aquaculture in the State with respect to the local coastal planning process. Aquaculture is viewed in California as a significant contributor to the state's economy and a potential major food producer. The development of local coastal projects in coordination with the needs of aqua- culture is very important to both California and its sea life. A brief overview of aquaculture industry is given. KEYWORDS: Socioeconomics institutions/planning/mgmt., shoreline use, urbanization California, Subregion I, Subregion II, Coastal Dunes of California AUTHOR(S): Cooper, William S. Bulletin of the Geological Society of America, Boulder, CO, 131 SOURCE: pages, Geological Society of America Memoir 104 DATE: 01/01/67 ABSTRACT: This is a geomorphic study of the coastal dunes in California as well as 5 localities in Northern Baja California. KEYWORDS: Geomorphology beaches, dunes, geology, geomorphic processes, wind

California, Subregion I, Subregion II, Subregion IV, Subregion V Surface Pressure Field Reconstruction For Wave Hindcasting Purposes AUTHOR(S): Corson, William D.; Resio, Donald T.; Vincent, Charles L. SOURCE: USACE, Waterways Experiment Station, Vicksburg, MS, Technical Report HL-80-11, 24 pages and figures DATE: 07/01/80 ABSTRACT: Numerical simulation of wave growth, propagation and decay under historical windfields is used to produce a wave climate profile for U.S. coastal waters. Steps for the calculations include: pressure field, wind speed and direction, analysis of vertical variation in wind, numerical model to simulate wave generation. KEYWORDS: Oceanography & Meteorology wave climate, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Pacific Coast Hindcast Deep Water Wave Information AUTHOR(S): Corson, William D.; Abel, C. E.; Brooks, R. M.; Farrar, P. D. SOURCE: USACE, Waterways Experiment Station, Coastal Engineering Research Center, Vicksburg, Mississippi, WIS Report 14, 211 pages DATE: 03/01/86 ABSTRACT: Twenty years of hindcast significant height, peak period, and mean direction wave information is summarized for 35 North Pacific location in four data products. a. Percent occurance tables. b. Wave nose diagrams. c. Mean and largest Hs and 20-year statistics tables. d. Return period table. Brief descriptions and examples for each data product are also provided. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Humboldt Bay Prototype Data Collection AUTHOR(S): Costa, Steven; Stork, James SOURCE: Humboldt State University, Arcata, CA, USACE San Francisco District, California, under contract DACW07-81-C-0029 DATE: 12/16/82 ABSTRACT: The primary purpose of the study was to provide field data necessary to adequately implement and verify a numerical model of the circulation of Humboldt Bay. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology coastal currents, stream gaging, tidal inlets, tides California, Subregion I, Eureka Cell

Tropical Storm Landfalls in Western North America, 1899-1948 AUTHOR(S): Court, Arnold; Mesleimen, Linda SOURCE: American Meteorological Society, Boston, MA, Second Conference on Coastal Meteorology, Jan 30-Feb 1, 1980, Available at University of California, Berkeley, Water Resources Archives DATE: 01/30/80 ABSTRACT: Catalog of most serious tropical storms in the northeast Pacific Ocean during the period 1899-1948. Data from monthly weather review and northern hemisphere daily maps. Includes consequen- ces of storms, identification and examples. KEYWORDS: Oceanography & Meteorology climatology, precipitation, storm damage, storms/floods, storm waves California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Analysis of Ocean Current Meter Records Obtained from a 1975 Deployment off the Farallon Islands, California AUTHOR(S): Crabbs, D. E. Battelle Pacific Northwest Laboratories, Richland, Washington; SOURCE: Prepared for Interstate Electronics Corporation, Anaheim, CA, Office of Radiation Programs, Wash., D.C. Report #EPA520/1-83-019 DATE: 08/01/83 ABSTRACT: Two botttom current records were obtained during August and September 1975 in the Farallon Islands low-level radioactive waste disposal area off San Francisco, California. This report presents the results of the data reduction and analysis of the current meter records, and interprets the results with respect to additional data collected in 1977. An effort is made to compare the patterns of current activity in the dumpsite area for the time periods measured. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, littoral sediment, California, Subregion III, S. Drakes Bay Reach, Bolinas Bay Cell Engineering and Economic Feasibility Study Inner Basin, Crescent City Harbor, California AUTHOR(S): Crescent City Harbor District SOURCE: Crescent City Harbor District, Crescent City, CA, Pages 30+, (date unknown) DATE: 01/01/86 ABSTRACT: This report consists of evaluation of tides, tsunamis, winds, soil analysis, and economics of Crescent City Harbor, California. KEYWORDS: Geomorphology, Oceanography & Meteorology, Socioeconomics coastal erosion problems, coastal structures, environmental constraints, geology, tsunamis, wind

California, Subregion I, S. Smith River Reach A Proposed Stream Flow Data Program for California AUTHOR(S): Crippen, J. R.; Beall, R. M. SOURCE: U.S. Geological Survey, Department of the Interior, Water Resources Division, 46 pages (appendix), illustrations and tables DATE: 08/25/70 ABSTRACT: An evaluation of the streamflow data available in California was made to provide guidelines for planning future programs. The basic steps in the evaluation procedure were (1) definition of the long-term goals of the streamflow data program in quantitative form, (2) examination and analysis of all available data to determine which goals have already been met, and (3) consideration of alternative programs and techniques to meet the remaining objectives. A streamflow data program based on the guidelines developed in this study is proposed for the future. KEYWORDS: Hydrology & Hydraulics institutions/planning/mgmt., river discharge, stream gaging, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Attenuation of Wave - Induced Pore Pressures AUTHOR(S): Cross, Ralph H.; Huntsman, Scott R.; Treadwell, Donald D.; Baker, Virgil A. SOURCE: Civil Engineering in the Ocean IV, Volume II, photocopy, pages 745-757, illustration, photos, (September 10-12, 1979 proceedings of the specialty conference), ASCE, New York, NY DATE: 09/12/79 ABSTRACT: A vertical piezometer array was installed from a municipal pier in California to measure wave-induced pore pressure in the near- shore soils. Located about 600 feet (183m) from shore in 16 feet (5 m) of water, the arrav included piezometers placed at 30, 60, 86, and 120 feet (9, 18, 26, and 37 m) below the seafloor. Fine sands were encountered throughout the depth of the sampled installation boring. Wave heights and pore pressure fluctuations were measured on six separate occasions in May, June, and July of 1978. Each monitoring effort extended over half a tidal cycle (approximately KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology coastal structures, storm damage, storm waves, wave climate California

Submarine Canyons Bordering Central and Southern California AUTHOR(S): Crowell, John C.

Journal of Geology, Vol. 60, California Division of Mines & SOURCE: Geology, Sacramento, CA DATE: 12/01/50 ABSTRACT: Not reviewed. KEYWORDS: Geomorphology geology, geomorphic processes, neotectonics, offshore/onshore transport, submarine canyons California, Subregion III, Subregion IV, Subregion V, Half Moon Bay Cell, S. Monterey Bay Cell, Carmel River Cell, Point Sur Cell A Comparison of Flood - Frequency Studies for Coastal Basins in California AUTHOR(S): Cruff, R. W.; Rantz, S. E. U.S. Geological Survey, Department of the Interior, Menlo Park, SOURCE: California, 116 leaves, illustrations prepared in cooperation with California Department of Water Resources DATE: 04/01/64 ABSTRACT: The study compares the results of regional flood-frequency studies made by several methods and appraises the relative re- liability of these methods. The areas selected for study were the subhumid San Diego area in southwestern California and the humid coastal area in northwestern California. The following six methods of analysis were applied to each region: index- flood method, multiple correlation, logarithmic normal distri- bution, extremevalue probability distribution (Gumbel method), Pearson type III distribution, and gamma distribution. KEYWORDS: Hydrology & Hydraulics river discharge, stream gaging, storms/floods, watersheds California, Subregion I, Subregion II, S. Spanish Flat Reach, Ten Mile River Cell, S. Ten Mile River Reach, Navarro River Cell Structural Framework of the Continental Margin Off Central California AUTHOR(S): Curray, Joseph R. Transactions of the New York Academy of Sciences, Series II, SOURCE: Volume 27, No. 7, (May) 1965. pages 794-801, map, diagrams DATE: 05/01/65 The structural framework of the continental margin off ABSTRACT: central California has been determined by means of acoustic reflection. It consists of thick accumulations of shelf and slope deposits over and behind a basement ridge, locally known to be granitic. Where this ridge is deeply buried, a wide and presumably thick continental rise has formed. Large scale sliding has locally modified steeper portions of the continental slope, especially seaward

of the basement ridge. This structure differs in degree of development, not in basic kind, from the east coast of the United States. KEYWORDS: Geomorphology, Survey geology, geomorphic processes, hydrographic surveys, littoral sediment, maps, petrology California, Subregion III, Subregion IV Fluvial-Sediment Discharge to the Oceans From the Conterminous United States AUTHOR(S): Curtis, W. F.; Culbertson, J. K.; Chase, E. B. SOURCE: U.S. Geological Survey Circular 670, p. 17 DATE: 01/01/73 Suspended-sediment discharge data obtained from 27 drainage ABSTRACT: areas during the period 1950-69 were used to estimate the sedi- ment mass contributed to the oceans from the conterminous United States. The quantity of sediment transported as bedload was estimated and added to the suspended load to arrive at a total sediment yield. Sediment yields to the oceans from individual basins, presented in a table, are also compared to previous estimates. The table includes average annual total sediment yields for San Francisco Bay, Mad River, and the Eel River. Average annual water and suspended-sediment discharge are also given for the gaging stations closest to the ocean for the Salinas, Russian, Eel, Mad, and Klamath rivers. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics river-bed sediment, river discharge, river sediment discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Marine Geology of Tomales Bay, Central California AUTHOR(S): Daetwyler, Calvin C., Jr. University of California, San Diego, Scripps Institution of SOURCE: Oceanography, La Jolla, CA, Dissertation 1965, 195 pages, Oceanic Abstracts (66-01213), Bethesda, MD DATE: 01/01/65 ABSTRACT: Not reviewed. KEYWORDS: Geomorphology estuarine sediment storage, geology, sea level change, sedimentation, submarine canyons California, Subregion II, Subregion III, Bodega Bay Cell, S. Bodega Bay Reach, Point Reyes Cell Marine Geology of Tomales Bay, Central California

AUTHOR(S): Daetwyler, Calvin C., Jr.

University of the Pacific, Pacific Marine Station, Dillon SOURCE: Beach, CA, Research Report No. 6, 169 pages DATE: 11/01/66 ABSTRACT: The primary objective of this investigation was to determine the relative effects of normal depositional processes and con-temporaneous strike-slip faulting on the recent sediment facies, thickness, distribution, and depositional history in Tomales Bay. Tomales Bay is a submerged rift valley lying along the axis of the northwest-trending, seismically-active San Andreas fault zone. Protected bay sediments are being deposited in a narrow, elongated, structural depression, characterized by known strikeslip faulting in historic times. KEYWORDS: Coastal Processes, Geomorphology estuarine sediment storage, geology, geomorphic processes, neotectonics, sedimentation, wave climate California, Subregion II, Subregion III, Bodega Bay Cell, S. Bodega Bay Reach, Point Reyes Cell Hydrologic Reconnaissance of Point Reyes National Seashore Area, California AUTHOR(S): Dale, R. H.; Rantz, S. E. SOURCE: U.S. Geological Survey Open-File Report (66-22), P. 37 DATE: 01/01/66 ABSTRACT: A hydrologic reconnaissance of the Point Reyes National Seashore Area was performed in 1964-65 to appraise potential sources of water supply at park sites where visitors accommodations are proposed. This report includes discharge data for 1964-65 for the creeks in the park; a generalized map of the park; and runoff and precipitation maps. A substantial portion of the report is devoted to precipitation patterns. Rainfall in the park is orographically influenced with mean annual precipi- tation ranging from 20 inches near the ocean to about 40 inches at a 1400' elevation at the park's east boundary. The variation of the mean annual precipitation is illustrated by a 64 year record (1878 to 1943) at the lighthouse where rainfall ranged KEYWORDS: Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology cliff sediment, geology, maps, precipitation, river discharge, stream qaqinq California, Subregion II, Subregion III, Bodega Bay Cell, S. Bodega Bay Reach, Point Reyes Cell, S. Point Reyes Reach, Drakes Bay Cell

National Shoreline Study, California Regional Inventory AUTHOR(S): Dames and Moore SOURCE: USACE, South Pacific Division, San Francisco, CA, 103 pages, pages, illustration, tables, folding plates, (note: there is a draft report from 1970 which is 95 pages) DATE: 08/01/71 ABSTRACT: This report presents an inventory of coastal shoreline characteristics of California, including major bays and estuaries. The coastal characteristics studied relate mainly to erosion produced by waves or other coastal phenomenon. KEYWORDS: Coastal Processes aerial photography, coastal erosion, shoreline changes, shoreline use, shore protection, wave climate California, Subregion I, Subregion II, Subregion IV, Subregion V Survey Report: Coastal Processes Study of Moss Landing Harbor, California AUTHOR(S): Dames and Moore SOURCE: Dames and Moore prepared for: USACE, San Francisco District, San Francisco, California DATE: 12/11/74 ABSTRACT: This study reviewed the scour and accreation problems near the entrance of Moss Landing Harbor based on a literature and data search of pertinent information, a field study the week of June 3, 1974, and interviews with knowledgeable residents in the Moss Landing area and Professor Joe Johnson (University of California at Berkeley). This report identifies the principle causes of both problems and recommends solutions to alleviate the situation. This report contains discussion on historical acc- reation and scour, shoreline change, littoral transport, tide levels, wave climate, wave refraction, wave diffraction, tidal currents, shoaling, and scour. The study also includes shore-KEYWORDS: Coastal Processes aerial photography, coastal erosion, littoral sediment, shoreline changes, tidal inlets, wave transformation California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Breakwater Protection, Proposed Pillar Point Harbor, Plan-411 AUTHOR(S): Dames and Moore SOURCE: San Mateo County Harbor Commission, EL Granada, CA, various pagings, illustrations, tables, folding plates

DATE: 09/19/75 ABSTRACT: This report presents the results of a study concerning breakwater protection and water circulation for the proposed Pillar Point Harbor. Site conditions were studied and wave height analysis was done as well as a model test program, a water cir- culation study, and a scheme comparison. Recommendations are made. KEYWORDS: Coastal Processes, Socioeconomics coastal currents, coastal structures, institutions/planning/mgmt., tides, wave transformation, wind California, Subregion III, Half Moon Bay Cell Proposed Jetty-head Repair Sections, Humboldt Bay, California Hydraulic Model Investigation AUTHOR(S): Davidson, D. D. USACE, Waterways Experiment Station, Vicksburg, MS, TRH-71-8, SOURCE: November 1971 DATE: 11/01/71 ABSTRACT: Tests were conducted on a 1:50 scale model of the north jetty at Humboldt Bay, Calif., to determine how to stop deterioration caused by wave action of the seaward ends of the north and south jetties at Humboldt Bav. Tests of the south jetty head were not conducted, since results of the study of the north jetty head will be applicable to future repairs on the south jetty. The study included the investigation of (a) the waves that can attack the proposed structure, (b) the effects on stability of linking the armor units, and (c) the optimum shape of armor unit and repair section that would be stable for the selected design-waves conditions. Repair sections were tested KEYWORDS: Coastal Processes, Hydrology & Hydraulics coastal structures, storm damage, storm waves, wave climate, wave transformation California, Subregion I, Eureka Cell Erosion and Sediment Transport in Pacific Rim Steeplands AUTHOR(S): Davies, T. R.; Pearce, A. J. SOURCE: New Zealand Lincoln College, Department of Agricultural Engineering, Canterburg, Int, Assoc. Hydrol. Sci., Publ. 132, 493-509 pages, GEOREF (1063794 81-50334) DATE: 01/30/81 Not reviewed. ABSTRACT: KEYWORDS: Geomorphology, Hydrology & Hydraulics river-bed sediment, river discharge, river sediment discharge, sedimentation, watersheds, watershed sediment

California, Subregion I, Subregion II, Subregion IV, Subregion V A Statistical Analysis of Monthly Rainfall for Monterey Peninsula and the Carmel Valley in Central California AUTHOR(S): Davis, David F. SOURCE: U.S. Naval Postgraduate School Monterey, CA, Master's Thesis, 208 Pages DATE: 03/01/81 ABSTRACT: This thesis presents a statistical analysis of the monthly rainfall for the Monterey Peninsula and the Carmel Valley in Central California. The analysis uses a simple first-order autoregressive Markov model. 2x2contingency tables are used to identify predictors, one of which is found to be January rainfall. KEYWORDS: Oceanography & Meteorology climatology, precipitation, storms/floods California, Subregion IV, S. Monterey Bay Cell, Carmel River Cell, S. Carmel River Reach Drifter Observations Of Coastal Surface Currents During CODE: The Method And Descriptive View; and The Statistical and Dynamical Views AUTHOR(S): Davis, R. E. SOURCE: Journal Of Geophysical Research, Richmond, VA, Vol 90, No. C3, Pages 4741-4755, 4756-4772 DATE: 01/01/85 ABSTRACT: Not Reviewed. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California California Coastal Erosion and Storm Damage During the Winter of 1982-83 AUTHOR(S): Dean, Robert G.; Armstrong, George A.; Sitar, Nicholas SOURCE: National Academy Press, Washington, D.C., 74 pages DATE: 01/01/84 ABSTRACT: The reconnaissance began near the Mexico-California border on March 9, 1983, and ended at Stinson Beach on March 13, 1983, covering a distance of approximately 600 miles. The time available to the team members was limited to these five days. The team's main effort was focused on visiting, observing and photographing as many areas along the coast as possible. The weather during most of the trip was cloudy and rainy, eliminating the possibility of extensive aerial. KEYWORDS: Geomorphology, Survey

aerial photography, coastal erosion, coastal erosion problems, maps, property value/land use, California, Subregion III, Subregion IV, Subregion V, South Central Region, South Coast Region, San Diego Region, Subregion VI Local Travel-Time Curves and Their Geological Implications for the Pacific Northwest States AUTHOR(S): Deblinger, Peter; Chiburi, E.F.; Colleer, M.M. SOURCE: Reprinted from "Bulletin of the Seismological Society of America". Berkeley, CA, Vol 55, No.3 Pages 587-607 DATE: 06/01/65 ABSTRACT: Travel-time curves were constructed for the Pacific Northwest states based on recordings of recent local earthquakes. Average velocities of P and S waves were found to be 4 percent lower in the region west of the Cascade Mountains than they are to the east of the Cascades, while velocities of P*, and P waves are essentially the same in the two provinces. KEYWORDS: Geomorphology geology, neotectonics California, Subregion I, Subregion II, Subregion IV, Subregion V Sediment Transport; Coast of Northern California AUTHOR(S): DeGraca, Henry M.; Ecker, Richard M. SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 01/01/74 ABSTRACT: This report deals with wave refraction and littoral transport at the northern sector in the narrow coastal plain between Cape Mendocino and Trinidad head. The studies were made using state of the art automatic data processing methods and a con- ceptual model was developed describing the coastal processes. The physiographic features of the northern sector were compared with those of the southern sector in order to determine the reason for differing characteristics of the two sectors. KEYWORDS: Coastal Processes longshore transport, wave climate, wave transformation California, Subregion I, Eureka Cell, S. Eureka Reach Study of the Ocean Beaches Adjoining the Russian River Mouth AUTHOR(S): DeGraca, Henry M. SOURCE: University of California, Berkeley, study paper for Civil Engineering 299, 43 pages DATE: 08/20/76 ABSTRACT: The purpose of this study is to develop a conceptual model of the

coastal processes to determine longshore net littoral and offshore movement along the ocean beaches in the vicinity of the Russian River mouth using state-of-the-art automatic data processing methods and to compare these data with known inform- ation on coastal processes obtained from sediment analysis, remote sensing, prior research and field investigations. The study is concerned with material-energy balances on the beaches in the study area. KEYWORDS: Coastal Processes, Geomorphology beaches, beach profiles, littoral sediment, longshore transport, river sediment discharge, California, Subregion II, S. Navarro River Reach-B, Russian River Cell, s. Russian River Reach, Bodega Bay Cell The Influence of Bed Material Size on the Tidal Prism-Area Relationship in a Tidal Inlet AUTHOR(S): Delmonte, R. C.; Johnson, J. W. University of California, Berkeley, Hydraulic Engineering Lab., SOURCE: Report No. HEL-24-8, 17 pages (AD-733 282) DATE: 08/01/71 ABSTRACT: Field data from a large number of tidal inlets on sandy coasts of the United States were analyzed and a relationship was es- tablished between the tidal prism and the minimum flow cross section of the entrance channel. Detailed sampling of bottom sediment was not available, but a summary of samples in the Golden Gate and its approaches showed little range in grain size. This finding indicates flow resistance in that vicinity may be controlled more by from resistance of ripples and sand waves than by grain size alone. То evaluate the effect of grain size more precisely, tests were repeated with different size sand grains and the results of the test compared. Test KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics beaches, beach nourishment/dredging, estuarine sediment storage, grain size, tidal inlets, tides California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V, Bolinas Bay Cell, San Francisco Cell A Digital Analysis of Internal Waves At Ocean Beach "P" AUTHOR(S): Denham, Denny J. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis DATE: 01/01/69 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Oceanography & Meteorology hydrographic surveys, wave climate, wave transformation

California, Subregion III, San Francisco Cell Evaluation of Emergency Shore Protection AUTHOR(S): Dettle, Mark SOURCE: University of California, Berkeley, unpublished Master's Thesis, 58 pages & appendix, available at University of California, Berkeley, Water Resources Archives DATE: 03/01/81 ABSTRACT: A study of the procedures necessary for effective emergency shore protection during storm periods focusing at Stinson Beach, Marin and Pot Bellv Beach, Santa Cruz. Four major subheadings: Organization and Planning, Technical Considerations, Permits Required, and Costs. KEYWORDS: Coastal Processes, Socioeconomics coastal erosion, coastal structures, institutions/planning/mgmt., shore protection, storm waves, tides California, Subregion III, Subregion IV, Bolinas Bay Cell, Santa Cruz Cell Guideline for Predicting Maximum Nearshore Sand Level Changes on Unobstructed Beaches AUTHOR(S): Dewall, Allan E.; Christenson, Julie A. SOURCE: USACE, Coastal Engineering Research Center, Waterways Experiment Station, CERC-84-4, Vicksburg, MS, March 1984 DATE: 03/01/84 ABSTRACT: This report summarizes the results of an office study of the magnitude of short-term beach profile changes at several locations along the U. S. East Coast, Gulf Coast, West Coast, and Lake Michigan Coast. Typical maximum sand-level change values ranged from 4 to 8 feet. KEYWORDS: Coastal Processes beaches, beach profiles, coastal erosion, coastal structures, littoral sediment, shoreline changes California Geologic map of the Point Sur Quadrangle, Caifornia. In Geologic maps of seven 15-minute quadrangles, California AUTHOR(S): Dibble, T. W., Jr. Geological Survey Open-File Map, scale 1:62,500, sheet 4 of 7 SOURCE: DATE: 01/01/73 ABSTRACT: A black-and-white geologic map with numerous bedding attitudes in the Point Sur area. The coast is mainly granitic and metamorphic rocks wtih about half of the coastline backed by elongate, coast parallel, bodies of alluvium. Three northwest trending bifurcating faults, the Sur, Colorado, and

Church Creek, intersect the coast in eight places between Hurricane Point and Soberanes Point. KEYWORDS: Geomorphology cliff sediment, geology, maps California, Subregion V, Point Sur Cell Geologic Map of the Montery Quadrangle, California, in Geologic Maps of Seven 15-minute Quadrangles, California AUTHOR(S): Dibble, T. W., Jr.; Clark J. C. SOURCE: Geological Survey Open-File Map, scale 1;62,500, sheet 1 of 7 DATE: 01/01/73 ABSTRACT: A black-and-white geologic map with numerous bedding attitudes in the Monterey and Carmel areas, but no bedding attitudes at Fort Ord and north to the Salinas River. Offshore structure is shown on the map. The Carmel/Monterey area coast is composed of a combination of granitic, metamorphic, and Quaternary sedimentary rocks. Two small faults intersect the coast near Seaside while two larger faults, the Navy and Cypress Point faults, intersect the coast on either side of the Monterey headland. KEYWORDS: Geomorphology cliff sediment, geology, maps California, Subregion IV, Subregion V, Collaborative Land-Use Planning for the Coastal Zone: Volume 1, A Process for Local Program Development AUTHOR(S): Dickert, Thomas; Sorensen, Jens SOURCE: University of California Institute of Urban & Regional Development, Zeuneby Institute of Marine Resources, La Jolla, CA, (Sea Front Publication No. 52, 120 pages), IURD monograph No. 27 IMR DATE: 03/01/78 The two volume monograph, Collaborative Land Use Planning for ABSTRACT: Coastal Zone, reports research conducted during the late 1970's. The research was aimed at developing methods for managing the cumulative impact of coastal development and evaluating the operability of the collaborative planning process as mandated by the California Coastal Act. KEYWORDS: Socioeconomics institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion IV The Recovery of Monterey Bay After the Winter Storms of 1982-83

AUTHOR(S): Dingler, John R.; Anima, Roberto J.; Clifton, H. Edward SOURCE: Coastal Zone '85, Proceedings of the Fourth Symposium on Coastal and

Ocean Management, Baltimore, MD, July 30-August 2, 1985, ASCE, New York, NY, Vol 2, pages 1295-1313 DATE: 08/01/85 ABSTRACT: The El Nino conditions of 1982 and 1983 produced unusually frequent and intense storms along the Central California Coast. The storms produced beach erosion in Monterey Bay, causing extensive damage. A survey of nine beaches was conducted along the eastern shore of Monterey Bay to document subsequent erosion and recovery. The survey produced shore-normal profiles along a main line that extended from the back of the beach to wading depth and along other, parallel lines that crossed only the beach face. Although beaches usually recover quickly from severe erosive events, this study suggests that even nearby KEYWORDS: Coastal Processes, Survey beach profiles, El Nino, shoreline changes, storm damage, storm surge, wave climate California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Coast of California Storm and Tidal Waves Study, Geomorphology Framework Report, Monterey Bay (Point Pinos to Point Santa Cruz) AUTHOR(S): Dingler, John R.; Laband, B. L.; Anima, R. J. SOURCE: Prepared for the U.S. Army Corps of Engineers, Los Angeles District by the U.S. Geological Survey, Menlo Park, California, text, tables, figures and plates (CCSTWS 85-2), December 1985 DATE: 12/01/85 ABSTRACT: This report summarizes the published data relating to the littoral zone of Monterey Bay, California. A morphodynamic model is developed usina available information on the distribu- tion, composition, and movement of littoral zone sediments; texture, composition, and supply rate of sediments from the three adjacent drainage basins; the composition, distribution and retreat rates of the coastal cliffs and dunes; and the geo-logic and tectonic history of the region. Because there is insufficient data to make a quantitative model, the report concludes with recommendations for future scientific studies KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics, Survey beach profiles, coastal erosion, geomorphic processes, littoral sediment, submarine canyons, watersheds California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Index to Research on Coastal and Esuarine Water in the United States AUTHOR(S): Ditsworth, George C. SOURCE: Pacific Northwest Water Laboratory, Corvallis, Oregon, Report

No.

W72-04209; FWPCA-16070-09/67, 37 pages DATE: 09/01/67 ABSTRACT: The index describes more than 250 research projects on coastal and esturine waters of the United States that were in progress during 1966 or were planned for the near future by governmental, academic, and private facilities. The projects encompass bio-logical, chemical, geological and physical aspects of the marine environment. The following information is listed for each project: (1) project title; (2) state where research is con- ducted or the state from which the study is conducted; (3) uni- versity or agency conducting the research; (4) principal inves- tigator(s) and (5) the information source. KEYWORDS: Coastal Processes, Geomorphology, deltas, environmental constraints, estuarine sediment storage, geology California Mad River Watershed Erosion Investigation AUTHOR(S): Dolcini, Albert J. California Department of Water Resources, California Resources SOURCE: Agency, Sacramento, CA DATE: 06/01/82 ABSTRACT: Reconnaissance report presenting the results of an one-year stu- dy of erosion and two-year study of turbidity in the Mad River Basin. Includes maps of geology, landslides, timber harvests and burns. KEYWORDS: Geomorphology, Hydrology & Hydraulics geology, maps, river sediment discharge, shoreline changes, watersheds, watershed sediment California, Subregion I, Eureka Cell Winter Storm Damage Along The California Coast 1977-78 AUTHOR(S): Domurat, George W. SOURCE: USACE, San Francisco District, San Francisco, CA, 75 pages, (AD-A064 309) DATE: 06/01/78 ABSTRACT: California experienced significant coastal damage during the winter of January and February 1978. A combination of high astronomical tides, strong onshore winds, high storm waves, and excessive rainfall produced an aggravated erosional condition. This report documents the causes and results of the dvnamic con- ditions which led to the storm damage along the California coastline. Also included, as an appendix, is a section of a report by the California Coastal Commission summarizing the cost analysis of damage to coastal California. KEYWORDS: Coastal Processes, Oceanography & Meteorology

coastal erosion problems, storm damage, storms/floods, storm surge, storm waves, tides California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Selected Coastal Storm Damage in California, Winter of 1977-78 AUTHOR(S): Domurat, George W. Shore and Beach, July 1978, Journal of the American Shore and SOURCE: Beach Preservation Association, O'Brien Hall, University of California, Berkeley, CA DATE: 07/01/78 ABSTRACT: This is concerned with the documentation on the dominant cause of the serious erosion along the California coast for the winter of 1977-78 compared with the previous 2 years, with wave data from the U.S. Navy Fleet Numerical Weather Central. A refraction diagram of the normal degree of wave exposure along the central California coast is included, as well as photos of the damage of coastline. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, storm damage, storms/floods, wave climate, wave transformation California, Subregion I, Subregion II, Beach Erosion Control Study, Ocean Beach, San Francisco, CA AUTHOR(S): Domurat, George W.; Pirie, Douglas M.; Sustar, John F. SOURCE: USACE, San Francisco District, CA, Published in Shore and Beach, October 1979 DATE: 10/01/79 ABSTRACT: Discusses serous beach erosion problem at Ocean Beach, San Francisco, California. KEYWORDS: Coastal Processes beaches, coastal erosion, coastal erosion problems, coastal structures, shoreline changes, shore protection California, Subregion III, San Francisco Cell Moss Landing Harbor, California: A Case History AUTHOR(S): Don Wong, Vincent SOURCE: University of California, Berkeley, 36 leaves, illustrations, photos, Archived at Water Resources Archives DATE: 06/16/70 ABSTRACT: This report is on the construction and maintenance of the entrance channel and protective jetties at Moss Landing Harbor, California and the effects these structures may have had on the nearby coastal environment. Basic shore processes pertinent to the area are described. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, longshore transport, shoreline changes, submarine canyons, tidal inlets, wave climate

California, Subregion IV, S. Monterey Bay Cell Report on California's Shoreline Protection Program AUTHOR(S): Doody, James J. SOURCE: California Department of Water Resources, Sacramento, CA, The Resources Agency, 9 pages presented at Annual Meeting of the American Shore and Beach Preservation Association, New York, NY DATE: 08/21/64 ABSTRACT: Report of the importance of California's beaches and on the shoreline Protection Program. Discussion of beach erosion. KEYWORDS: Coastal Processes, Socioeconomics aerial photography, beaches, coastal erosion, coastal erosion problems, institutions/planning/mgmt., shore protection California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V An Investigation of Near-Bottom Currents in Monterey Submarine Canyon AUTHOR(S): Dooley, John J. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis DATE: 01/01/68 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology, Survey hydrographic surveys, nearshore currents, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Equilibrium Sand Slopes in Front of Sea Walls AUTHOR(S): Dorland, G. M. SOURCE: University of California, Berkeley DATE: 05/01/40 ABSTRACT: Discusses serious beach erosion problem at Ocean Beach, San Francisco, California. KEYWORDS: Coastal Processes beaches, coastal erosion, coastal erosion problems, coastal structures, geomorphic processes, littoral sediment California, Subregion III, San Francisco Cell The Southern Monterey Bay Littoral Cell: A Preliminary Sediment Budget Study AUTHOR(S): Dorman, Craig E. SOURCE: U.S. Naval Post Graduate School, Monterey, CA, Master's Thesis, 233 pages with sketches DATE: 12/01/68 This study deals with the sedimentary environment and the ABSTRACT: move- ment of sediments in the southern portion of Monterey Bay, California. The primary purpose of the work was to outline the major factors contributing to the sand budget of the area and to correlate these factors with the present areal patterns and textural properties of beach and nearshore surface sediments. KEYWORDS: Coastal Processes, Geomorphology

grain size, littoral sediment, longshore transport, river sediment discharge, sedimentation California, Subregion IV, S. Monterey Bay Cell A Literature Survey of Information Relevant to the Design, Construction and Operation of a Supertanker Terminal Offshore Humboldt Bay, CA AUTHOR(S): Dornhelm, Richard SOURCE: University of California, Berkeley, unpublished student paper, 51 pages, appendices, available at the Water Resources Archives (Wiegel) DATE: 12/10/69 ABSTRACT: A survey of relevant data for the construction of an offshore tanker platform at Humboldt Bay. Data includes: topography, bathymetry, precipitation, wind, storm, visibility, tides, sea level changes, sea swell, currents, littoral sediment, geology, seismicity, terminal design. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Survey coastal structures, hydrographic surveys, littoral sediment, precipitation, wave climate, wind California, Subregion I, Eureka Cell The Joint California - National Ocean Survey Program in California AUTHOR(S): Dowden, James N. SOURCE: Shore and Beach, Journal of American Shore and Beach Preservation Association, Hall, O'Brien Hall, University of California, Berekeley, CA, Volume 51, No. 3, July 1983, pages 38-39 DATE: 07/01/83 ABSTRACT: Survey of California tidal bench mark network. All published maps and reports are available from the National Ocean Survey. KEYWORDS: Survey bench marks, maps, tides California, Subregion I, Subregion II, Subregion IV, Subregion V Sea Levels and Metered Currents Off Central California AUTHOR(S): Dreves, Donald A. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 95 pages DATE: 09/01/80 ABSTRACT: Sea levels from two locations, the alongshore sea level gradient, and direct measurement of currents by moored current meters are examined and discussed. The observations were made off the central California coast during the Davidson Current period 1978-9. Analysis for spectral variance of hourly

and low pass filtered sea levels, alongshore sea level gradient, and alongshore and cross shelf currents was performed. Comparison of spectral estimates of low pass filtered data indicate that current and sea level gradient energy distributions are in close agreement. This is interpreted to suggest that a relationship may exist between the observed currents and the longshore sea level gradient. In contrast, KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey coastal currents, longshore current, nearshore currents, sea level change, tides, wind California, Subregion II, Subregion III, Subregion IV, Subregion V Radioisotopic Sand Tracer Study, Point Conception, California AUTHOR(S): Duane, David B.; Judge, Charles W. SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, Miscellaneous Paper #2-69, 81 pages DATE: 05/01/69 The purpose of the study was to develop and use radioactive ABSTRACT: tracers for research in sand movement and littoral processes. Objectives include determination of suitable radioactive iso- topes, development of radiation detectors, and development of handling and survey programs. Concurrent with these objectives, studies of sediment transport around the Point Conception headland and of the mechanics of littoral transport are being conducted. Methods developed by this program have direct application to engineering design of such works as harbor development and beach erosion prevention, and quasi-military application such as the location of radioactive or other toxic materials. KEYWORDS: Coastal Processes, Survey environmental constraints, grain size, hydrographic surveys, littoral sediment, longshore transport, petrology California, Subregion VII, Santa Barbara Cell Tracing Sand Movement in the Littoral Zone: Progress in the Radioisotopic Sand Tracer (RIST) Study AUTHOR(S): Duane, David B. SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, Miscellaneous Paper #4-70, 46 pages (ITS MP 4-70) DATE: 08/01/70 ABSTRACT: Tagging procedures, instrumentation, field surveys and data handling techniques have been developed by the radioisotopic sand tracing study for the collection and analysis of over 12,000 bits of information per hour over а

survey track of about 18,000 feet. Data obtained can be considered as nearly synoptic observations of sediment transport in a single environmental zone or in adjacent beach, surf and offshore zones. Experiments at Surf, Point Conception, Point Muqu, and Oceanside, California used sand tagged with isotopes of xenon or gold. Data from studies in beach areas unmodified by littoral barriers indicate that the alongshore velocity of sediment transport differs from KEYWORDS: Coastal Processes, Survey beaches, hydrographic surveys, littoral sediment, longshore transport California, Subregion I, Subregion II, Subregion IV, Subregion V Synoptic Observations of Sand Movement AUTHOR(S): Duane, David B. SOURCE: USACE, Coastal Engineering Research Center, Washington, D.C., Proceedings of 12th Coastal Engineering Conference, September 13-18, 1970. Washington, D.C., Volume Z; ASCE, New York, p 799-81 DATE: 09/13/70 Radioisotope tagging procedures, hardware development, field ABSTRACT: surveys, and data handling techniques permited collection and analysis of over 12,000 bits of sand transport information per hour over a survey track of approximately 18,000 feet. Using sand tagged with isotopes of gold, experiments were carried out at several sites on the California Coast. Transport seaward of peaking-breaking waves is less than transport on the beach face, which is less than transport in the surf zone. Because of these differences, tracing surveys confined to the foreshore or offshore zones produce data only partially indicative of transport in the zone of immediate concern to coastal KEYWORDS: Coastal Processes, Survey beaches, coastal erosion, littoral sediment, longshore transport California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Maps Showing Geology and Liquefaction Potential of Quaternary Deposits in Santa Cruz County, California AUTHOR(S): Dupre, W. R. SOURCE: U.S. Geological Survey Miscellaneous Field Studies Map MF-648, scale 1:62,500, 2 sheets DATE: 01/01/73 ABSTRACT: This field study report includes two 1:62,500 scale blackand-white maps covering Santa Cruz County. One map is a geolo- gic map showing only Quaternary (younger than 2 million years old) deposits. 16 Quaternary units are

shown west of Soquel Creek while 12 units are shown east of Soquel Creek. The second map rates the liquefaction potential of the same area. KEYWORDS: Geomorphology cliff sediment, geology, geomorphic processes, maps, neotectonics California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell Modern and Ancient Coastal Sedimentary Facies Monterey Bay, CA AUTHOR(S): Dupre, W. R.; Clifton, H. E. SOURCE: Geological Society of America, Cordilleran Section Meeting, San Jose. California, April 1979, Field Trip Guidebook, 50 pages, illustrations DATE: 04/01/79 ABSTRACT: Sedimentary facies are best studied by combining analysis of modern depositional systems with interpretation of ancient deposits. The coast of Monterey Bay offers an excellent oppor- tunity for this approach. Pleistocene shoreline deposits are well exposed in the sea cliffs in the northern part of the bay. The paleogeography and paleo-oceanographic setting of these deposits almost certainly resemble those of the present coast. The same processes that shape the modern facies influenced the development of the ancient deposits. The purpose of this field guide is to examine the modern geologic setting and to compare the modern deposits to their Pleistocene counterparts. KEYWORDS: Coastal Processes, Geomorphology cliff sediment, geology, neotectonics, sedimentation California, Subregion IV, Santa Cruz Cell Map Showing Geology and Liquefaction Potential of Northern Monterey and Southern Santa Cruz Counties, California AUTHOR(S): Dupre, W. R.; Tinsley, J. C. III U. S. Geological Survey Miscellaneous Field Studies Map MF-SOURCE: 1199, scale 1:62,500, 2 sheets DATE: 01/01/80 ABSTRACT: Two 1:62,500 scale maps of Monterey and southern Santa Cruz Counties are presented in this field studies report. The first sheet is a black-and-white geologic map, without bedding attitudes, that divides Quaternary (younger than 2 million years old) rocks into 34 maps units. The second sheet rates the liquefaction potential of the same area in five categories from low to very high and shows locations with historical evidence of liquefaction. KEYWORDS: Geomorphology cliff sediment, geology, geomorphic processes, maps, neotectonics California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell

Beach Nourishment Techniques-Wave Climated for Selected U.S. Offshore Beach

Nourishment Projects AUTHOR(S): Durham, Donald L.; Hales, Lyndell Z.; Richardson, Thomas W. SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS Technical Report Appendices A-K, various pagings DATE: 04/01/81 ABSTRACT: Compilation of data describing the wave climates at all the test sites for this beach nourishment study. KEYWORDS: Coastal Processes beach nourishment/dredging, wave climate California, Subregion VII Ocean Wave Climate AUTHOR(S): Earle, M. D.; Molakoff, A. Pleneum Press, New York, NY, 378 pages, 6-306-40079-0, Fluidex SOURCE: (090121x) DATE: 01/01/79 ABSTRACT: This publication deals with wave mode and wave data applications; providing winds for wave models; practical determinations of design wave conditions; and state-of-the-art wave prediction methods. Also considered are wave measurements; ocean surface features observed by HF coastal groundwave radars. KEYWORDS: Coastal Processes, Oceanography & Meteorology remote sensing, storms/floods, storm surge, wave climate, wave transformation, wind California, Subregion I, Subregion II, Subregion IV, Subregion V Monthly Mean Charts Sea Surface Temperature North Pacific Ocean 1949-1962 AUTHOR(S): Eber, L. E.; Saur, J. F. T.; Sette, O. E. SOURCE: U.S. Bureau of Commercial Fisheries, Circular 258, U.S. Department of the Interior DATE: 06/01/68 ABSTRACT: Atlas containing 168 monthly sea surface temperature charts for the Northern Pacific Ocean. Each chart contains isotherms for intervals 1øC and plotted values representing the density of observation by grid squares. KEYWORDS: Oceanography & Meteorology environmental constraints, maps California Report on Meteorological Conditions at Bodega Head and Bodega Bay AUTHOR(S): Eberly, D. L.; Robinson, L. H. SOURCE: Pacific Gas and Electric Company, San Francisco, CA DATE: 06/04/62 ABSTRACT: The meteorological conditions for this report include: surface winds, precipitation, surface wet bulb temperature; Point Reyes 1938-41 wet

season and dry season, fastest mile of wind recor- ded at Point Reyes and the duration and frequency of various intensities of precipitation for Point Reyes. KEYWORDS: Oceanography & Meteorology climatology, precipitation, wind California, Subregion II, S. Bodega Bay Reach, Point Reyes Cell Ocean Beach Sand Replenishment Program AUTHOR(S): Ecker, R. M. SOURCE: Towill, Inc., San Francisco, CA, Prepared for city and county of San Francisco, Clean Water Program, 83 Pages, diagrams, tables DATE: 10/01/80 ABSTRACT: A sand replenishment program was developed for Ocean Beach to insure that a protective beach is always present seaward of the new Westside Transport structure. The estimated implement- ation dates and required quantities of sand for the recommended sand replenishment program have been based on Ocean Beach conditions during the last 20 years. The behavior of the Upper Great Highway fill in 1927-1929, which extended the shoreline up to 200 feet seaward has also provided valuable information for the development of the sand replenishment program. KEYWORDS: Coastal Processes beach nourishment/dredging, coastal erosion problems, longshore transport, sea level change, California, Subregion III, San Francisco Cell Economic Impacts of The Proposed Coastal Plan - A First Report and Further Proposals AUTHOR(S): Economics Research Associates; Alvin H. Baum and Associates SOURCE: California Legislature, Sacramento, CA, Joint Rules Committee DATE: 10/10/75 This report outlines (1) range of economic impacts of the ABSTRACT: coastal plan - commerce, housing, economic values, land values, public costs, public revenues (2) significant economic impacts, agricultural issues, development, recreation, energy, ports (3) cost of carrying out the coastal plan KEYWORDS: Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., property value/land use, shoreline use, urbanization California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V

A Review of the National Shoreline Erosion Control Program AUTHOR(S): Edge, Billy L.; Housley, John G.; Watts, Geroge M.

SOURCE: Submitted for publication to the Journal of the Marine Technology Society, Washington, D.C., available at University of California, Berkeley, Water Resources Archives DATE: 11/02/77 ABSTRACT: Over two-hundred devices, both proven and untested devices, had been cataloged as a part of the National Shoreline Erosion Control Demonstration Program. This program called for the Corps of Engineers to plan, establish, and conduct for a period of five years a shoreline erosion control development and demonstration program including physical and vegetative devices. KEYWORDS: Coastal Processes coastal erosion problems, coastal structures, shore protection California, Subregion I, Subregion II, Subregion IV California Nearshore Surface Currents: Past Observations and Recent Remote Sensing Information AUTHOR(S): Edmisten, Robert J. University, California at Berkeley, student paper for Civil SOURCE: Engineering 299, 22 pages DATE: 06/01/74 ABSTRACT: Discussion of prevalent nearshore currents: oceanic periods, California current, Davidson current, upwelling. Included are known data pertaining to these currents and relevant information recently obtained by remote sensors. KEYWORDS: Coastal Processes nearshore currents, remote sensing California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Proceedings of Conference on Sediment Problems in California AUTHOR(S): Einstein, Hans A.; Johnson, J. W. SOURCE: University of California, Berkeley, Committee on Research in Water Resources, 142 pages DATE: 11/27/56 ABSTRACT: Conference held to discuss sediment problems in California. A thorough look is given to past practices and proceedings to reappraise old data. An account of the conference dialogue and conference structure is given discussing various projects in California. Studies are provided by various agencies on sediment problems concerning forestry, streams, and various tidal problems. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, river sediment discharge, watershed sediment California, Subregion I, Subregion II, Subregion IV, Subregion V

A Literature Review on Erosion and Deposition of Sediment Near Structures in the Ocean AUTHOR(S): Einstein, Hans A.; Wiegel, Robert SOURCE: U.S. Naval Civil Engineering Labaratory; University of California, Berkeley, Hydraulic Engineering Laboratory, College of Engineering, HEL-21-6 DATE: 02/01/70 ABSTRACT: The purpose of this study was to define the occurrence and effects of scour and fill in the vicinity of ocean bottom structures and foundations. KEYWORDS: Coastal Processes, Geomorphology coastal currents, coastal erosion, coastal structures, geomorphic processes, grain size, sedimentation California, Subregion I, Subregion II, Subregion IV A Basic Description of Sediment Transport on Beaches AUTHOR(S): Einstein, Hans A. University of California, Berkeley, Hydraulic Engineering SOURCE: Laboratory, Report No. HEL-2-34, 41 pages (AD-733 279) DATE: 08/01/71 ABSTRACT: Studies at the Hydraulic Engineering Laboratory, University of California, focusing on the mathematical methods of determining the depth sand can be moved by wave action. To make this determination, sediment motions were divided into bedload motion, surface creep and suspension. KEYWORDS: Coastal Processes, Geomorphology grain size, longshore transport, offshore/onshore transport, sand entrapment, sedimentation, wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V The Climate of Humboldt and Del Norte Counties AUTHOR(S): Elford, Robert C.; McDonough, Max R. Humboldt and Del Norte Counties, CA, Agricultural Extension SOURCE: Service, 34 pages, number 6 DATE: 01/01/64 A report of the climatology of Humboldt and Del Norte ABSTRACT: Counties. Includes discussion of terrain, temperature, freezes, precipi- tation. wind, cloudiness, and also growing seasons. Tables and illustrations are also included. KEYWORDS: Oceanography & Meteorology bench marks, climatology, environmental constraints, maps, precipitation, wind California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell, S. Klamath River Reach, Eureka Cell, S. Eureka Reach

Climate of Sonoma County AUTHOR(S): Elford, Robert C. SOURCE: U.S. Weather Bureau, Sonoma County, CA, Agriculture Commissioner University of California Farm Advisor DATE: 01/01/64 ABSTRACT: Effect of terrain on climate includes Appendix Tables: Table #11 Frequency of Wind Direction and speed - Santa Rosa. Appendix Table #12 -Frequency of specified sky conditions - Santa Rosa. Appendix Table #2 -Temperature Means and Extremes. KEYWORDS: Oceanography & Meteorology aerial photography, precipitation, wind California, Subregion II, Russian River Cell The Climate of Santa Clara and Santa Cruz Counties AUTHOR(S): Elford, Robert C.; Stilz, John E. SOURCE: Environmental Data Services Administration, Environmental Data Services, San Francisco, CA DATE: 02/01/67 ABSTRACT: This report includes: the June wind data of Moffett Field, percentage frequency of wind observation & mean wind speed for each direction, Hollister California, and the surface wind summary in Moffett Field, CA, March 1945-1952. KEYWORDS: Oceanography & Meteorology climatology, precipitation, wind California, Subregion IV, Santa Cruz Cell The Climate of Monterey County AUTHOR(S): Elford, Robert C.; Stilz, John E. SOURCE: Environmental Science Services Administration, Environmental Data Services, San Francisco, CA DATE: 08/01/68 ABSTRACT: Monterey reports wind from the Northwest or North about onethird of the time, with a secondary maximum from the South quadrant. Precipitation, mostly in the form of rain, occurs primarily during the Winter half of the year. Along the coast there are 50 to 55 days per year with measurable rain, 35 to 45 days with 0.10 inches or more. Report includes maps & tables of monthly & seasonal precipitation. Also greatest Monthly & Annual Precipitation Number of days with 0.1, 0.10, 0.50 inches precipitation. Special Precipitation Table of Monterey, Wind Data for Hollister. Wind Data of Monterey; Wind Data of Point Piedras Blancas; Wind Data of Salinas. KEYWORDS: Oceanography & Meteorology climatology, maps, precipitation, wind California, Subregion V, S. Monterey Bay Cell

Coastal Mapping Handbook AUTHOR(S): Ellis, Melvin Y.; U.S. Geological Survey SOURCE: United States Government Printing Office, Washington, D.C., National Ocean Survey, Office of Coastal Zone Management, 200 pages DATE: 01/01/78 ABSTRACT: The objective of the handbook is to provide general information and guidance on coastal mapping. It contains sections on product and data sources, map projection and grid system, remote sensing, photogrammetric mapping techniques, maps, charts, over- prints and overlays, data extraction techniques, land use and land cover mapping. KEYWORDS: Survey aerial photography, bench marks, maps, remote sensing California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V, Subregion VI, Oceanographic Survey for Crown Simpson Pulp Mill at Fairhaven Site, Humboldt Bay, California AUTHOR(S): Engineering - Science, Inc. SOURCE: Crown Zellerbach Corporation, Seattle, Washington, (prepared for) 1 volume, various pagings, tables, illustrations, graphs DATE: 01/10/67 ABSTRACT: Two oceanographic surveys were done to obtain information for the design and evaluation of the proposed ocean outfall for waste water discharge from Crown Simpson Pulp Mill. The report considers hydrography and hydrodynamics pertinent to the proposed ocean outfall construction. Also, the results of physical, chemical and biological background investigation made in the receiving water area are included. KEYWORDS: Oceanography & Meteorology, Socioeconomics coastal currents, nearshore currents, shoreline use, wave climate, wind California, Subregion I, Eureka Cell Oceanographic Investigations in Central Monterey Bay, Survey Activities AUTHOR(S): Engineering - Science, Inc. SOURCE: Monterey Peninsula Water Pollution Control Agency, Pacific Grove, CA DATE: 07/22/76 ABSTRACT: Results of an oceanographic survey performed to design an ocean outfall in Central Monterey Bay. Study includes current metering programs. KEYWORDS: Oceanography & Meteorology, Survey coastal currents, wave climate, wind California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell

Oceanic Investigations in Carmel Bay: Review of Existing Information (Draft) AUTHOR(S): Engineering - Science, Inc. SOURCE: Prepared for Kennedy Engineers, Inc., San Francisco, CA, by Engineering - Science, Inc., Berkeley, California, 185 pages DATE: 04/01/77 ABSTRACT: This report represents the completion of task Al Literature Review for Carmel Bay Oceanographic Studies. It covers such topics as: The Geology of Carmel Bay, Water Movements, Water Quality, Marine Biology, and the Human Uses of Carmel Bay. This is a study of a number of alternatives for wastewater treatment and disposal. One alternative is continued ocean disposal through an extended or relocated submarine outfall that conveys wastewaters beyond the boundaries of the area of special biological significance, designated in Carmel Bay by the State Water Resources Control Board. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, environmental constraints, geology, maps, nearshore currents, shoreline use California, Subregion IV, Carmel River Cell Final Facilities Plan Report for North Monterey County AUTHOR(S): Engineering - Science, Inc. SOURCE: Monterey Peninsula Water Pollution Control Agency, Pacific Grove, CA, 400 pages, illustrations, folding maps, tables, 28 cm., bibliography page A2-A8 DATE: 01/16/78 ABSTRACT: This report is a facilities plan concerned with effective water pollution control activities in Northern Monterey County. It covers existing and projected study area characteristics, analysis of existing wastewater charateristics, analysis of existing wastewater facilities, waste discharge and treatment requirements, design criteria and evaluation procedures, development and evaluation of alternatives. Also incorporated into this report are seven previously published documents related to the facilities planning effort. KEYWORDS: Socioeconomics coastal structures, environmental constraints, California, Subregion IV, Subregion V, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell, S. Carmel River Reach Draft Environment Impact Report, Monterey Bay Boatworks, Marine Repair Berthing Facility AUTHOR(S): Environmental Management Consultants SOURCE: Monterey, City of, by Environmental Management, Monterey, California,

1982 DATE: 03/01/82 ABSTRACT: Draft EIS includes, site location and description, project characteristics and history, marine engineering and design for wind waves, tsunamis including lateral loads and impact loads. Includes references, but reference list omitted from this copy. KEYWORDS: Oceanography & Meteorology, Socioeconomics coastal structures, coastal structures, tsunamis, wave climate, wind California, Subregion IV, S. Monterey Bay Cell, S. Carmel River Reach, Point Sur Cell Environmental Impact Report, Eureka-Arcata Regional Sewage Facility Project AUTHOR(S): Environmental Research Consultants, Inc. SOURCE: Prepared by Environmental Research Consultants, Inc., Arcata, California, February 1974 DATE: 02/01/74 ABSTRACT: An overview of biological, physical, and social conditions in the Eureka-Arcata area. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics environmental constraints, geology, population, river-bed sediment, sedimentation, watershed sediment California, Subregion I, Eureka Cell Shore Protection of Seadrift Spit and Stinson Beach, Bolinas Bay AUTHOR(S): Errington, Roger University of California, Berkeley, unpublished student paper SOURCE: 45 pages, available at University of Califonia, Berkeley, Water Resources Archives (Wiegel) DATE: 03/14/79 A study of the beach profile of Stinson Beach, along with ABSTRACT: possible protective measures to halt erosion. KEYWORDS: Coastal Processes, Geomorphology aerial photography, beach profiles, coastal currents, shore protection California, Subregion III, Bolinas Bay Cell A Field Study of Tide-Induced Sand Movement on Del Monte Beach, California AUTHOR(S): Eubanks, Glen E. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, available from Defense Technical Information Center, Alexandria, VA, 101 pages DATE: 06/01/68 ABSTRACT: Beach-elevation measurements were made and samples were collected daily along a profile extending from the back of the beach out to a water depth of approx. 23 feet. Wave and tide data were measured continuously

at the site. The beach is well sheltered, and low sea swell parallel to the beach predominates. KEYWORDS: Coastal Processes beaches, beach profiles, grain size, littoral sediment, tides, wave climate California, Subregion IV, S. Monterey Bay Cell Data From Deep Moored Instrument Stations AUTHOR(S): Evans, Martha W.; Schwartzlose, Richard A.; Isaacs, John D. SOURCE: University of California, San Diego, Scripps Institute of Oceanography, La Jolla, CA, (SIO Reference No. 68-17) DATE: 06/01/68 ABSTRACT: Deep-moored instrument buoys that collect near-surface meteorological and subsurface oceanographic data have been under development for many years. This report presents some of the data collected by such buoys in graphic and tabular form. The method of data processing is summarized. All the processed data are available in the form of listings, punched cards or magnetic tape. Some of the oceanographic phenomena that appear in the graphs are described. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, wave climate, wind California, Subregion I, Subregion II, Geology and Ground-Water Features fo the Eureka area, Humboldt County, California AUTHOR(S): Evenson, R. E. SOURCE: U. S. Geological Survey Water-Supply Paper 1470, P. 80 DATE: 01/01/59 ABSTRACT: Geological information in this report is presented in a 1:62,500 scale, color geologic map. Precipitation data, summarized in bar graphs, is presented for Eureka and Scotia in the text section. KEYWORDS: Geomorphology, Oceanography & Meteorology cliff sediment, dunes, geology, maps, precipitation California, Subregion I, Eureka Cell Solid Earth and Oceanic Tides Recorded on the Ocean Floor Off the Coast of Northern California AUTHOR(S): Ewing, M. SOURCE: American Geophysical Union, 49th. Annual Meeting held in Washington, D.C., April 8-11, 1968; Volume 49, No. 1, pages 211- 212, Oceanic Abstracts (68-04237), Bethesda, MD DATE: 03/08/68 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology tides California, Subregion I, Subregion II, Subregion III

Satellite Observations of the 1982-1983 El Nino along the U.S. Pacific Coast AUTHOR(S): Fiedler, Paul C. SOURCE: Science, American Association for the Advancement of Science, Washington, D.C., Volume 224, No. 4654, 15 June, 1984, pages 1251-1254, photos, diagrams DATE: 06/15/84 ABSTRACT: Satelite infrared temperature images illustrate several effects of the 1982-1983 El Nino: warm sea-surface temperatures with the greatest anomalies near the coast, weakened coastal upwell- ing, and changes in surface circulation patterns. Phytoplankton pigment images from the Coastal Zone Color Scanner indicate re- duced productivity during El Nino, apparently related to the weakened coastal upwelling. The satellite images provide direct evidence of mesoscale changes associated with the ocean- wide El Nino event. KEYWORDS: Oceanography & Meteorology climatology, coastal currents, El Nino, remote sensing California, Subregion I, Subregion II, Subregion III, Subregion IV Geology and Geologic Hazards of Offshore Eel River Basin, Northern California Continental Margin AUTHOR(S): Field, M. E.; Clarke, S. H. Jr.; White, M .E. SOURCE: U. S. Geological Survey Open -File Report 80-1080, P. 80 DATE: 01/01/80 ABSTRACT: This report summarizes the offshore geology of the Eel River Basin, California, and presents grain-size data pertinent to onshore/offshore transport. In 1977, gravity cores were taken at 63 stations to characterize surface sediments and obtain stratigraphic information. The cores were taken as close as 5 miles to shore in water depths as shallow as 50 m. Sediments from the upper 10 cm of each core was analyzed for grain size. KEYWORDS: Geomorphology, Survey geology, grain size, maps, neotectonics, offshore/onshore transport, sedimentation California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell, A Lagrangian Method for Predicting Pollutant Dispersion in Bolinas Lagoon, Marin County, California AUTHOR(S): Fisher, Hugo B. SOURCE: U. S. Geological Survey Professional Paper 582-B, P. B1-B32 DATE: 01/01/72 ABSTRACT: A numerical method is described which is capable of predicting the movement and dispersion of a pollutant in a tidal embayment. The method requires

a knowledge of the embayment geometry and of a typical tidal cycle of water surface elevations at various interior points. The model includes a convective step, a diffusive step, and a concentration-decay step. The model was verified by predicting the dispersion of slug of Rhodamine WT dye tracer discharged near the mouth of Bolinas Lagoon, California. The report includes the code and an annotated flow chart for the model's computer program. KEYWORDS: Geomorphology, Hydrology & Hydraulics coastal currents, estuarine sediment storage, California, Subregion III, Bolinas Bay Cell An Investigation of Possible Causes of the So-Called "Sneaker Wave" at Tomales Bay, California AUTHOR(S): Fisher, Hugo B.; French, Richard H.; Della, Richard University of California, Berkeley, Hydraulic Engineering SOURCE: Laboratory, 37 pages, (HEL-28-1) DATE: 01/01/76 Report on the mysterious "sneaker wave" at the entrance to ABSTRACT: Tomales Bay. Includes analysis of tidal and ocean conditions and depths of flow. Also field observations, laboratory work and possible explanation. KEYWORDS: Coastal Processes, Oceanography & Meteorology tides, wave climate, wave transformation California, Subregion II, Bodega Bay Cell, S. Bodega Bay Reach, Point Reyes Cell Sedimenation in the Drainage Basin of the Pacific Coast States - A Summary of Published and Unpublished Information AUTHOR(S): Flaxman, Elliott M.; High, Robert D. U.S. Department of Agriculture, Soil Conservation Service, SOURCE: various pagings DATE: 06/01/55 ABSTRACT: A summary of published and unpublished information on sedimentation in the western coastal United States. KEYWORDS: Hydrology & Hydraulics river-bed sediment, river sediment discharge, watershed sediment California, Subregion I, Subregion II, Subregion IV, Subregion V Climatology of California Coastal Waters. Focuses on the area from 31 North Latitude to 42 North Latitude, within 150 miles of California Coast AUTHOR(S): Fleet Weather Central SOURCE: Fleet Weather Central, Alameda, CA, 113 pages DATE: 07/01/72 ABSTRACT: The document contains a summary of weather and sea conditions along

the California Coast, prepared from all available marine data archived in the National Weather Records Center, Asheville, North Carolina. KEYWORDS: Oceanography & Meteorology climatology, precipitation, storms/floods, storm waves, wave climate, wind California, Subregion I, Subregion II, Subregion IV, Subregion V Deep Ocean Current and It's Correlation with the Ocean Tide Off the Coast of Northern California AUTHOR(S): Fleigel, M. SOURCE: Journal of Geophysical Research, Richmond, VA, Volume 73, No. 6, pages 1921-1932, 11 Figures, 3 Tables, 16 References, Oceanic Abstracts (68-04216), Bethesda, MD DATE: 03/15/68 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology coastal currents, tides California, Subregion I, Subregion II, Subregion III Characteristics of Estuarine Sediments of the United States AUTHOR(S): Folger, D. W. SOURCE: U. S. Geological Survey Professional Paper 742, P. 94 DATE: 01/01/72 ABSTRACT: This report is a compilation of data on texture and composition of bottom sediments, including the hydrologic factors that influence them, in 45 estuaries in the conterminous United States. A paragraph of references from the 1950's and 1960's about San Francisco Bay included. KEYWORDS: Geomorphology, Hydrology & Hydraulics deltas, estuarine sediment storage, geology, grain size, petrology, river sediment discharge California, Subregion III, Bolinas Bay Cell, San Francisco Cell The Use of Pb-210, Th-234 and Cs-137 as Tracers of Sedimentary Processes in San Francisco Bay, California AUTHOR(S): Fuller, Christopher C. University of Southern California, Los Angeles, USC Sea Grant SOURCE: Institute for Marine and Coastal Studies, 251 pages DATE: 12/01/82 ABSTRACT: A thesis presented to the faculty of the Graduate School, University of Southern California. Measurements of Th-234, Pb-210 and Cs-137 in the sediments, water column, and suspended particles of the San Francisco Bay, were taken in attempt to identify sedimentary processes and the geochemical behaviors of reactive elements in this estuarine system. KEYWORDS: Coastal Processes

estuarine sediment storage, geology, sedimentation California, Subregion III, San Francisco Cell An Assessment of Coastal Protection Structures Between San Francisco and Carmel, California AUTHOR(S): Fulton - Bennett, Kim N. SOURCE: University of California, Santa Cruz, CA, Master's Thesis, 213 pages DATE: 12/01/84 ABSTRACT: Report presents a qualitative Assessment of the successes and and failures of seawalls and revetments along the central California coast over the past 60 years. A criteria for success of the structure was established based on damage sustained, effect on shoreline erosion, and storm damage. Riprap, concrete seawalls, timber seawalls, concrete debris, and gunnite protection were examined, and the success rates compared. Relationships between different storm conditions, environmental settings, and failure modes of each type of structure were examined. KEYWORDS: Coastal Processes coastal erosion, coastal structures, shore protection, storm damage, storms/floods, storm waves California, Subregion III, Subregion IV, Subregion V, San Francisco Cell, Half Moon Bay Cell, Santa Cruz Cell, Carmel River Cell A Manual for Researching Historic Coastal Erosion AUTHOR(S): Fulton, Kim University of California, Santa Cruz, CA, Science Writing SOURCE: Program, Report T-CSGCP-003, A California Sea Grant College Publication, La Jolla, CA, 1981 DATE: 01/01/81 ABSTRACT: This manual is intended to help land-use planners, geologist, engineers, and other concerned with coastal erosion to collect historical information about shoreline, sea bluff, and cliff retreat. KEYWORDS: Coastal Processes coastal erosion, shoreline changes California Experiments With a Free Floating Wave Buoy AUTHOR(S): Galus, Albert J. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis DATE: 01/01/70 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology, Survey wave climate California, Subregion I, Subregion II, Subregion IV, Subregion V Ocean Beach-San Francisco AUTHOR(S): Galvin, Cyril J.

SOURCE: San Francisco Wastewater Program; Cyril Galvin, Coastal Engineer, Springfield, VA, 1 vol (various pagings) maps, diagrams DATE: 01/01/79 ABSTRACT: The volume contains four reports prepared by the author for the San Francisco wastewater project with assistance from the Cali- fornia Coastal Commission. The reports are as follows: I. Compilation of facts relating to a coastal study of Ocean Beach San Francisco. This establishes the known facts about the littoral processes and erosion on Ocean Beach. II. Coastal processes and sediment budget at Ocean Beach, San Francisco. This second report sets forth a hypothesis about how the littor- al processes on Ocean Beach work. III. Predicted shorelines at Ocean Beach San Francisco. This evaluated three future scenar- ios on the Ocean Beach. IV. Design recommendations for Ocean KEYWORDS: Coastal Processes beach nourishment/dredging, coastal erosion, littoral sediment, longshore transport, offshore/onshore transport, wind transport California, Subregion III, San Francisco Cell Short Period Oscillations in Monterey Bay Current Records AUTHOR(S): Gano, Richard D. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis DATE: 06/01/70 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Oceanography & Meteorology longshore current, nearshore currents California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Type 16 Flood Insurance Study: Tsunami Predictions for Pacific Coastal Communities AUTHOR(S): Garcia, Andrew W.; Houston, J. R. USACE, Waterways Experiment Station, Vicksburg, Mississippi, SOURCE: Technical Report H-74-3, 128 pages, Water Resources Abstracts (085763 W75-07283) DATE: 05/01/74 Calculations of runup due to seismic sea waves (tsunamis) of ABSTRACT: distant origin are made for 15 coastal communities within the state of California and 3 coastal communities within the state of Alaska. The value given are interpreted as being equaled or exceeded on the average of once per 100 or once per 500 years, whichever is indicated. The combined effects of astronomical tides and tsunamis are incorporated into the analysis. Analysis of the error attributed to each of the various steps in the procedure results in an estimated maximum average error of about plus or minus 40 percent for the Southern California

KEYWORDS: Oceanography & Meteorology tsunamis, wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Type 16 Flood Insurance Study: Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound AUTHOR(S): Garcia, Andrew W.; Houston, James R. USACE, Waterways Experiment Station, Hydraulics Laboratory, SOURCE: Vicksburg, MS, Technical Report H-75-17, 263 pages DATE: 11/01/75 ABSTRACT: Calculations of runup due to seismic sea waves (tsunamis) of distant origin were made for Monterey and San Francisco Bays and the greater part of Puget Sound. The values presented are interpreted as being equaled or exceeded on the average of once per 100 or once per 500 yr, whichever is indicated. All runup values are referenced to the mean sea level datum. The combined effects of astronomical tides and tsunamis are in- corporated into the analysis as are certain local effects. KEYWORDS: Coastal Processes storm surge, tides, tsunamis California, Subregion III, Subregion IV, Effect of Source Orientation and Location in the Peru-Chile Trench on Tsunami Amplitude Along the Pacific Coast of the Con-tinental United State AUTHOR(S): Garcia, Andrew W. USACE, Waterways Experiment Station, Hydraulic Laboratory, SOURCE: Vicksburg, MS, 44 pages DATE: 09/01/76 An idealized axis of the Peru-Chile Trench was divided into ABSTRACT: 12 segments of equal length. A hypothetical bottom displace- ment which generates a tsunami with intensity approximately equal to four was centered in three of the segments. An explicit finite difference numerical code was used to simulate generation and propagation of the resulting tsunami to the west coast of the continental United States. Additionally, the tsunami of 22 May 1960 was simulated and comparison made to gage records at selected open coast locations along the U.S. Pacific coast. An analytical technique is used to KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V

Numerical Simulation of Currents in Monterey Bay

AUTHOR(S): Garcia, Roland A. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 147 pages, illustrations, (AD721597) DATE: 03/01/71 ABSTRACT: Interest in pollution control and the proximity of Monterey Bay to the Naval Postgraduate School prompted an investigation of the circulation in the bay. The first phase of the study consisted of solving the simple cavity flow problem. A vortic- ity-stream function relationship is solved using an explicit, time dependent, finite difference scheme. Solutions for selected Reynolds' numbers and length to width ratios of the cavity are obtained. Values are chosen to give an indication of the flow patterns occurring over a wide range of these para- meters. Equations for a refined model are derived to include the effects of the bottom topography, frictional forces and the Coriolis force. Results indicate that closed circulation KEYWORDS: Coastal Processes coastal currents, nearshore currents, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell The Crowded Coast: The Development and Management of the Coas- tal Zone of California AUTHOR(S): Gardner, Barbara S. University of Southern California, Los Angeles, CA, Center for SOURCE: Urban Affairs, 147 pages DATE: 07/01/71 ABSTRACT: This is a report dealing with a conference series by USC Center for Urban Affairs in 1971. Topics included were Land use planning, the base of the pyramid for environmental control, The San Francisco Bay Conservation and Development Commission, and Legislative Proposals Dealing with the Coastal Zone. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., shoreline use, urbanization California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Mineralogical and Sedimentological Data Collected on the Shelf and Upper Slope Adjacent to the Russian River, Northern CA AUTHOR(S): Gardner, J. V.; Klise, D. H. SOURCE: U.S. Geological Survey Open-File Report 83-517, 35 pages DATE: 01/01/83 ABSTRACT: This report documents textural and mineralogical analyses of surface

sediments from the shelf and upper slope of the conti- nental margin west of the Russian River, in northern California. During three cruises in 1980-81, 56 sampling stations, in water depths ranging from 20 to 2000 m, were occupied and sediment samples were collected using gravity, piston, van Veen, and box corers. The surface samples were taken from the upper 10 cm of the cores. Tn addition to textural analyses, petrographic studies of the silt fraction and x-ray diffraction of the clay fraction were carried out to determine the mineralogy of the samples. The data are presented in 17 plots; interpretations of the data are not included in the report. KEYWORDS: Geomorphology geology, grain size, petrology California, Subregion II, Russian River Cell Quantitative Microsfossil, Sedimentologic, & Geochemical Data on Core L13-81-G138 & Surface Samples from the Continental-Shelf and Off Shelf, CA AUTHOR(S): Gardner, J. V.; Barron, J. A.; Dean, W. E. SOURCE: U.S. Geological Survey Open-File Report 84-369, pages 118 DATE: 01/01/83 ABSTRACT: This report presents stratigraphic data from core L13-81-G138 and data from 75 surface samples collected from the continental slope and shelf off northern California adjacent to the Russian River. The samples were taken in water depths ranging from about 20 to 3500 m. Data is presented on fossils, sediment grain size, pollen inorganic chemistry, clay and silt mineralogy. KEYWORDS: Geomorphology geology, grain size, petrology California, Subregion II, Russian River Cell Effects of the Santa Cruz Harbor on Sedimentation and Erosional Processes in the Adjacent Areas AUTHOR(S): Garnica, Janet Available at USACE, San Francisco, District, San Francisco, CA, SOURCE: Unpublished, 4 pages (photocopied) DATE: 01/01/80 ABSTRACT: Santa Cruz Harbor entrance has contributed to the interruption of littoral flow of sand which has caused changes in both sedi- mentation and erosional processes to the surrounding areas. In particular, Captiola Beach has experienced depletion in sand supply that has required development of an artificial beach. Shoaling of the Santa Cruz entrance channel occurs within a

short period of time, causing frequent boating incidents. A permanent sand bypassing system might alleviate both the sed- imentation and erosional processes now threatening the harbor and adjacent beaches. KEYWORDS: Coastal Processes coastal erosion problems, coastal structures, longshore transport, sedimentation, shoreline changes, shoreline use California, Subregion IV, Santa Cruz Cell Special Report No. 1, An Oceanography Survey of the Humboldt Bay System; Physical and Chemical Data AUTHOR(S): Gast, James A. SOURCE: Humboldt State University, Division of Natural Resources, Department of Oceanography, Arcata, CA, 73 pages, charts DATE: 12/01/62 ABSTRACT: This volume presents a tabulation of physical and chemical observations made at various locations in the Humboldt Bay system during the period from September 1961 to September 1962. The positions of the sampling stations are shown. Values of temperature, chlorinity, salinity, sigmat, dissolved oxygen, dissolved inorganic phosphate-phosphorous and silicatesilicon are given for depths from the surface to near the bottom. KEYWORDS: Oceanography & Meteorology climatology California, Subregion I, S. Klamath River Reach, Eureka Cell A Drift Bottle Study in Northern California AUTHOR(S): Gast, James A. Limnology and Oceanography, Volume II, No. 3, July 1966, pages SOURCE: 415-417, 1 Figure, 1 Reference, Oceanic Abstracts (66-04252), Bethesda, MD DATE: 07/01/66 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology coastal currents, nearshore currents California, Subregion I, Subregion II, Eureka Cell Bottom Current Measurements in the Head of Monterey Submarine Canyon AUTHOR(S): Gatje, Peter H.; Pizinger, Donald D. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis DATE: 01/01/65 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Oceanography & Meteorology nearshore currents, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Treatment Plant Site Plan Layout and Access Road, Marina County Water District, Sheet T-2 AUTHOR(S): George S. Nolte and Associates SOURCE: Marina County Water District, Monterey County, CA

DATE: 04/01/68 ABSTRACT: Topographic Map, scale 1"=50 feet of immediate coastal area. KEYWORDS: Survey beaches, dunes, maps California, Subregion IV, S. Monterey Bay Cell Waste Water Treatment Plan Flow Diagram AUTHOR(S): George S. Nolte and Associates SOURCE: Marina County Water District, Monterey County, CA DATE: 12/01/81 ABSTRACT: Plan map of plant, scale 1-inch=20 feet, showing top edge of shoreline bluff. KEYWORDS: Survey beaches, dunes, maps California, Subregion IV, S. Monterey Bay Cell A Comparison of Step Pressure and Continous-Wire-Gage Wave Recordings in the Golden Gate Channel AUTHOR(S): Gerhardt, J. R.; Jehn, K. H.; Katz, I SOURCE: Transactions American Geophysical Union, Washington, D.C., Volume 36, No. 2, Pages 235-250 DATE: 04/01/55 ABSTRACT: Step, pressure, and continuous-wire-type wave gages were installed on a steel pile located in 35 to 40 ft of water approximately 600 ft off the northeastern end of Baker's Beach, San Francisco. Simultaneous measurements with all gages were made on a nearly continuous basis during April 1953. The data were evaluated to obtain characteristic wave periods and heights, height probability distributions, auto-correlation functions, and power spectra. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion III, Bolinas Bay Cell, The Natural Resources of Bolinas Lagoon, Their Status and Future AUTHOR(S): Gigvere, Paul E. SOURCE: California Department of Fish and Game, Sacramento, CA, 107 pages & appendices, coastal wetland series No. 31 DATE: 12/01/70 ABSTRACT: This report summarizes the lagoon's history, ecological attractions, educational values and the problems facing its continued existence. Sources of additional and more specific information are given. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Socioeconomics environmental constraints, institutions/planning/mgmt., sedimentation, tidal inlets California, Subregion III, Bolinas Bay Cell

Surface Temperature and Salinity Observation at Pacific Northwest Shore Stations for 1967 AUTHOR(S): Gilbert, William; Wyatt, Bruce SOURCE: Oregon State University at Corvallis, OR, School of Science, Department of Oceanography, Data Report No. 28, 21 pages and references (Ref No. 68-1) DATE: 02/01/68 ABSTRACT: A collection of data from stations along the Oregon and Northern California coast including: temperature distribution, salinity and general offshore conditions. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology California, Oregon, Subregion I, S. Smith River Reach, Klamath River Cell River Mouth and Beach Sediments - Russian River, California, to Rouge River, Oregon, Part A, Introduction and Grain Size analyses AUTHOR(S): Glogoczowski, M.; Wilde, P. University of California, Berkeley, College of Engineering, SOURCE: Hydraulic Engineering Laboratory, Report HEL-2-36, Nov 1971, 73 pages DATE: 11/01/71 ABSTRACT: Sand samples of intertidal, beach, and River Mouth and bar deposits from 65 sites along the northern California and southern Oregon coast were analysed for grain size properties. These samples were taken to provide source area information for a projected study of the offshore sediments of the Northern California Continental Shelf. The data are presented graphical-ly as cumulative weight percent curves and histograms with respect to grain size. The statistical parameters median, sorting coefficient skewness and Kurtosis are calculated for KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment, longshore transport, river-bed sediment. sand bars California, Oregon, Subregion I, Subregion II Sand and Gravel in California - An Inventory of Deposits, Part A -Northern California AUTHOR(S): Goldman, Harold B. SOURCE: California Division of Mines, Sacramento, CA, Bulletin 180 A, 38 pages and maps DATE: 01/01/61 ABSTRACT: A reconnaissance field investigation of sand and gravel deposits in 17 counties of Northern California was conducted from 1958-1960. Deposits that

were worked commercially and undeveloped deposits of commercial interests were examined. Fixed plants were visited, pits sampled, and gravel examined in the labora- tory. Stream deposits, dredge and hydraulic tailings and fluvioglacial deposits were identified as the principal sources of sand and gravel in Northern California. KEYWORDS: Geomorphology geology, petrology, river-bed sediment California, Subregion I, Subregion II Bolinas Harbor District Observations of Wave Period and Wave Direction at Brighton Avenue, Bolinas, CA, 5/10/68 to 3/15/69 AUTHOR(S): Goldsberry, Archie A. SOURCE: Unpublished, 1 volume (various pagings), illustrations, tables, graphs, 2 handwritten pages, available at the University of California, Berkeley, Water Resources Archives DATE: 03/15/69 ABSTRACT: This report contains the wave observations of the wave period and wave direction at Brighton Avenue, Bolinas from May 10, 1968 through March 1969. KEYWORDS: Coastal Processes wave climate, wave transformation California, Subregion III, Bolinas Bay Cell Atlas of Rainfall Frequency in California AUTHOR(S): Goodridge, James D. SOURCE: California Department of Water Resources, Sacramento, CA, DWR Bulletin DATE: 01/01/83 ABSTRACT: Maps in this report are compiled to show storms of various durations and return periods for use in the design of drainage structures. These maps will allow the easy comparison of design storm magnitudes among the stations in a project area and easy inter-station interpolation between weather stations. Data is intended for reconnaissance type study. It can best be used as a quide to the detailed data available at individual weather stations. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology climatology, maps, precipitation, storms/floods, wind California, Subregion I, Subregion II, Geology of Southern Monterey Bay and Its Relationship to the Ground Water Basin and Salt Water Intrusion AUTHOR(S): Green, Gary H. SOURCE: U.S. Geological Survey, Open-file report 1970, 50 pages DATE: 01/01/70 ABSTRACT: Describes alluvial deposits in Monterey Bay and attempts to

correlate subsurface geology of Monterey Bay to aquifers in the lower Salinas Valley. Determines possible entrance areas for sea water intrusion. Extensive and detailed geophysical survey was made of Monterey Bay. Seismic reflective sub-bottom profil- ing was conducted by the U.S.G.S. using a 600 joules sparker source with a fundamental frequency of 1000 Hertz. A dead penetration system of 8,000 to 12,000 joules and a fundamental frequency of 85 Hertz was also used. KEYWORDS: Geomorphology, Survey geology, hydrographic surveys, sedimentation, submarine canyons California, Subregion IV, S. Monterey Bay Cell Southern Monterey Bay AUTHOR(S): Green, Gary H. SOURCE: U.S. Geological Survey, Open File Map (4-plates) DATE: 01/01/72 ABSTRACT: Maps of Southern Monterey Bay Plate 1- Marine Geologic Map of Southern Monterey Bay with bathymetric contour interval 10 meters 1inch=1.176 nautical miles Plate 2- Orthographic drawing of South Monterey Bay. Plate 3-Isopach Map of Total Water - Bearing Material, contour interval 30 meters. Plate 4- Bathymetry of Southern Monterey Bay 10 meter interval < 100 meter depth 50 meter interval > 100 meter depth KEYWORDS: Geomorphology, Survey geology, hydrographic surveys, maps, sedimentation, submarine canyons California, Subregion IV, S. Monterey Bay Cell Geology of the Monterey Bay Region AUTHOR(S): Green, Gary H. SOURCE: U.S. Geological Survey Open-File Report 77-718, 340 pages DATE: 01/01/77 ABSTRACT: This study concerns a marine geological exploration of the Monterey Bay area using modern geophysical and geological tools and methods, and integrates the data gathered with evidence from onshore geologic studies. The resulting synthesis clarifies the tertiary evolution of this portion of the Pacific margin with a special focus on tectonic history. KEYWORDS: Geomorphology, Survey geology, maps, neotectonics, submarine canyons California, Subregion IV, Subregion V, S. Half Moon Bay Reach-B, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell, Point Sur Cell Monterey Submarine Canyon AUTHOR(S): Green, Gary H. SOURCE: U.S. Geological Survey, Reston, VA, 2 pages, published in California

Geology, California Division of Mines and Geology, Sacramento, CA, Volume 30, No. 5, pages 112-113, (AD-E600 339) DATE: 05/01/77 ABSTRACT: Subjects include Submarine Canyons, Historical geology, Sea level changes, Faults and faulting(geology), Submarine topography, Marine qeology, Ground motion, Stream erosion, Granite, Sediment. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, petrology, sea level change, sedimentation, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Guidebook to the Recent, Quaternary, Plio-Pleistocene and Franciscan Geology of Western Humboldt County AUTHOR(S): Greene, R. P. Published in National Association of Geologic Teachers, SOURCE: Harrisburg, PA, Far West Section, pages 16-21, (GEOREF 1160654 83-19243) DATE: 01/01/82 Not reviewed. ABSTRACT: KEYWORDS: Coastal Processes, Geomorphology coastal erosion, geology, geomorphic processes California, Subregion I, Klamath River Cell, Eureka Cell, S. Eureka Reach, Mattole River Cell, S. Mattole River Reach, Spanish Flat Cell Earthquake Activity Between Monterey and Half Moon Bay, California AUTHOR(S): Griggs, Gary B. SOURCE: California Geology, California Division of Mines and Geology, Sacramento, CA, May 1973, Volume 26, No. 5, pages 103-110 DATE: 05/01/73 ABSTRACT: This report discusses seismic activity and faulting between Monterey and Half Moon Bay, the 1906 San Francisco earthquake, other earthquakes and the Half Moon Bay area. KEYWORDS: Geomorphology geology, neotectonics California, Subregion III, Subregion IV, Half Moon Bay Cell, S. Half Moon Bav Reach-A, S. Half Moon Bay Reach-B, Santa Cruz Cell, S. Monterey Bay Cell The Effects of the Santa Cruz Harbor on Coastal Process of Northern Monterey Bay, California AUTHOR(S): Griggs, Gary B.; Johnson, R. E. SOURCE: Environmental Geology, New York, NY, 1976, Volume 1, No. 5, page 299, Environmental Bibliography (0601657) DATE: 01/01/76 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes coastal structures, longshore transport, shoreline changes

California, Subregion IV, Santa Cruz Cell

Form, Genesis, and Deformation of Central California Wave-Cut Platforms AUTHOR(S): Griggs, Gary B. SOURCE: University of Colorado, Boulder, CO, Department of Geological Sciences, Geological Society of America Bulletin 87 (3):433-449, March 1976. Oceanic Abstracts (76-05447), Bethesda, MD DATE: 03/01/76 ABSTRACT: Descriptors: Subjects include terraces; erosion; wave action; sediment transport; sea levels; california coast; shores; and geomorphology. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, geomorphic processes, longshore transport, sea level change, sedimentation, shoreline changes California, Subregion III, Subregion IV, Subregion V Coastline Erosion, Santa Cruz County AUTHOR(S): Griggs, Gary B.; Johnson, Rogers E. California Geology, California Division of Mines and Geology, SOURCE: Sacramento, CA, Volume 32, No. 4, Pages 67-76 DATE: 04/01/79 ABSTRACT: This report discusses coastline erosion near Santa Cruz, CA. The tertiary sedimentary rocks exposed along the Santa Cruz coastline vary considerably in their resistance to erosion due to differences in exposure, degree of cementation, struc- ture, and stratigraphy. The presence of joints, faults, and erodible stratigraphic units have led to average long-term erosion rates of about 30 centimeters (cm) per year or greater in some areas. Much of the erosion, however, is episodic, and occurs during major storms. Considerable damage has occurred along the coast during past winter storms. Valuable beachfront property has disappeared, roads have been destroyed, homes have been undercut, damaged, or ruined. The 1977-78 KEYWORDS: Coastal Processes, Socioeconomics cliff sediment, coastal erosion, coastal erosion problems, geology, shore protection, storm damage California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell Sources, Dispersal, and Clay Mineral Composition of Fine-Grained Sediment off Central and Northern California AUTHOR(S): Griggs, Gary B.; Hein, J. R. SOURCE: Journal of Geology, Chicago, IL: University of Chicago Press, Volume 88, pages 541-566 DATE: 09/01/80 ABSTRACT: Distinct sediment samples from the continental margin were

delineated in the study area. Fine-grained sediment (clay) delivered to the continental margin of central and northern California is dominated by input from coastal rivers. Suspended sediment from northern California streams (the Eel, Klamath-Trinity, Mad, Smith, and Mattole Rivers, and Redwood Creek) amounts to 81 percent of the sediment produced between Point Conception and the Oregon Border. Offshore circulation during periods of peak sediment discharge is dominated by the northerly flowing Davidson Current. LANDSAT imagery reveals large clockwise gyres that transport suspended sediment KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology cliff sediment, coastal currents, longshore transport, offshore/onshore transport, remote sensing, river sediment discharge California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Impact of 1983 Storms on the Coastline, Northern Monterey Bay, Santa Cruz County AUTHOR(S): Griggs, Gary B.; Johnson, Rogers E. SOURCE: California Geology, California Division of Mines and Geology, Sacramento, CA, August 1983, Volume 36, No. 8, pages 163-174 DATE: 08/01/83 ABSTRACT: The article describes geologic setting; oceanographic conditions and storm history; coastal damage in 1983; and construction atop eroding sea cliffs. Photos of the damaged areas described are included with captions. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology beaches, coastal erosion, geology, storm damage, storm waves, wave climate California, Subregion IV, Santa Cruz Cell Living with the California Coast AUTHOR(S): Griggs, Gary B.; Savoy, Lauret National Audubon Society, Duke University Press, Durham, North SOURCE: Carolina, Gary Griggs and Lauret Savoy, Editors, 394 pages DATE: 01/01/85 ABSTRACT: This book is divided into two parts. Part 1 gives general information about coastal processes, (ie tides, waves) and the effects it has on the beaches, cliffs, and coastal structures. This part of the book discusses possible structural and nonstructural solutions to coastal erosion problems. Part II is the site specific section of the book. This part divides the coast into 12 regions and discusses the history of erosion for each of the regions. There is an extensive use of maps and photographs.

KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics beaches, coastal erosion, shoreline changes, shoreline use, shore protection, wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V The Social Environment of Noyo Harbor and the Probable Impact of Proposed Harbor Development Alternatives AUTHOR(S): Gross, Robert L. SOURCE: USACE, San Francisco District, San Francisco, CA, Contract No. DACW07-82-M-0596 DATE: 07/30/82 ABSTRACT: The U.S. Army Corps of Engineers has been studying the feasibil- ity of modifying the Noyo River and Harbor located south of Fort Bragg, Ca. This report is a result of the Corp's request for a social environment study of the area. The research was conducted over a six week period during Jan. and Feb. 1982. This study provides socio-economic data relating to four proposed river and harbor planning alternatives. KEYWORDS: Socioeconomics coastal structures, environmental constraints, growth potential/recreation, population California, Subregion II, A Study of Sand Movement at the San Francisco Entrance AUTHOR(S): Gustafson, Edward W. SOURCE: University of California, Berkeley, Thesis, Civil Engineering, 40 pages, photos, maps, tables DATE: 04/01/31 Study deals with sand movement on San Francisco and adjoining ABSTRACT: beaches and what effect the sand movement has upon the bar at the entrance to S.F. Bay. Determines causes for sand movement on these beaches. KEYWORDS: Coastal Processes, Survey beach profiles, littoral sediment, longshore transport, sand bars, shoreline changes California, Subregion III, Bolinas Bay Cell, San Francisco Cell Ocean Wave Statistics for the California Coast AUTHOR(S): Habel, John S. SOURCE: California Department of Navigation and Ocean Development, Sacramento, CA, 4th Annual Symposium on the Waterways, Port, Coast- al and Ocean Division of ASCE, Vol. 2, ASCE, 1977, New York, NY DATE: 03/09/77 ABSTRACT: Presents ocean wave statistics compiled from a 29-year data base for

six selected deep water stations along the California coast. The U.S. Navy Fleet Numerical Weather Central (FNWC) in Monterey has produced synoptic singular wave analyses for the northern hemisphere since 1946. This data has been utilized to provide deep water wave statistics for coastal engineering applications. The computer programs developed to produce this wave climatology can be utilized to provide similar statistics for deep water locations in any part of the northern hemisphere. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Ocean Wave Statistics for the California Coast AUTHOR(S): Habel, John S. Shore and Beach, Journal of the American Shore and Beach SOURCE: Preservation Association, University of California, Berkeley, O'Brien Hall, Berkeley, CA, Volume 45, No. 33, Pages 3-9 DATE: 07/01/77 ABSTRACT: The ocean wave statistics for the California coast derived from the FNWC synoptic singular wave analyses provided the most complete history of deepwater wave climatology available through 1976. This information was compiled from a 29-year data base, utilizing a mathematical model which has been found to compare reasonably with observations at sea. Additional information on extreme events, persistence, and maximum frequency of occurrence were included. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion I, Subregion II, Assesment and Atlas of Shoreline Erosion Along the California Coast AUTHOR(S): Habel, John S.; Armstrong, George A. State of California, The Resources Agency, Department of SOURCE: Naviga- tion and Ocean Development, Sacramento, CA, 277 pages, prepared for the office of Coastal Zone Management, NOAA DATE: 07/01/78 ABSTRACT: A study of the shoreline erosion problems along the ocean shoreline of California with a description of the general coastal processes. The more critical areas, both existing and potential, are noted as well as the where shoreline pro- tection has been installed. An atlas of 129 maps locates

erosion conditions. The physical characteristics of the shoreline segments are briefly described on each map along with photographs. The coastline is divided into littoral cells; the source, movement, and losses of beach sands are noted. KEYWORDS: Coastal Processes, Survey beaches, coastal erosion, longshore transport, maps, shoreline use, submarine canyons California, Subregion I, Subregion II, Subregion IV, Subregion V Ecological Implications of Breakwater Construction in Monterey Harbor AUTHOR(S): Haderlie, E. C. Marine Pollution Bulletin, Elmsford, NY, Pergamon Press, Inc, SOURCE: Journals Division, Volume 2, No. 6 DATE: 06/01/71 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes coastal structures, environmental constraints, shore protection California, Subregion IV, S. Monterey Bay Cell Wrath of the Pacific Brings Doom to Dunes at Pajaro AUTHOR(S): Hagihara, Randy SOURCE: Penisula Times Tribune, Palo Alto, CA, pages A-1, A-4 DATE: 03/22/83 ABSTRACT: The severe weather in California in 1983 damaged beaches, roads, and structures. Article examines the damage and discusses the revetments residents were building to protect their houses. KEYWORDS: Coastal Processes, Socioeconomics coastal erosion problems, coastal structures, dunes, property value/land use, storm damage California, Subregion IV, Santa Cruz Cell Water Wave Refraction/Diffraction/Shoaling Investigation, Crescent City, California AUTHOR(S): Hales, Lyndell G. SOURCE: USACE, Waterways Experiment Station, Vicksburg, MS; USACE, Los Angeles District, Los Angeles, CA, 95 pages, CERC '85 DATE: 11/01/84 ABSTRACT: The outer breakwater which protects the harbor at Crescent City Calif, has experienced recurring damages of varying degrees since its initial construction in 1930. In 1974, 246 400-ton, unreinforced dolosse were placed on the sea-side slope of the last 230 ft of the breakwater's main stem. By 1982 it was beleived that approx. 70 of these dolosse had experienced break- age. No

physical model tests had been performed for dolosse stability purposes when this breakwater repair was accomplished. The subject study was initiated because of questions regarding the stability of various construction elements used in the ori- ginal design and rehabilitation, and because of uncertainties KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal erosion problems, coastal structures, storm damage, wave climate, wave transformation California, Subregion I, S. Smith River Reach, Klamath River Cell Ocean Currents, A Climatological and Oceanographic Analysis of the California Pacific Outer Continental Shelf Region AUTHOR(S): Halliwell, G.; Williams, R. G.; Vierra, K.; Mooers, C. N. University of Delaware; NOAA Environmental Data and Information SOURCE: Service, Washington, D.C. DATE: 01/01/81 ABSTRACT: The California Current System is driven primarily by the wind stress patterns over the North Pacific Ocean. The California Current System variability is controlled primarily by inter- actions between the subtropical high pressure cell over the North Pacific Ocean and the atmospheric thermal low located over California/Nevada. The wind field produces southward oceanic flow in the spring and summer in response to southward- directed wind stress. Associated Ekman transport results in a circulation away from the coast in the near-surface layers, with concomitant upwelling of cold water from below. In the KEYWORDS: Oceanography & Meteorology climatology, coastal currents, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Drift Bottle Studies at Bodega Head, California AUTHOR(S): Hamby, Robert J. University of the Pacific, Pacific Marine Station, Dillon SOURCE: Beach, CA, for California Cooperative Oceanic Fisheries Investigations and the Office of Naval Research, 49 pages (AD-611 066) DATE: 11/15/64 From July 7, 1962 to July 30, 1963 twenty-eight drift bottle ABSTRACT: experiments were performed in the Bodega Bay region of Central California. The pattern of returns showed that most of the bottles were recovered within a few miles radius of Bodega Head. The possibility of a prevailing northerly current close to shore along Bodega Head is indicated. Periods of heavy northwest winds

result in a dispersal of drift bottles to the south in the summer, while southeast storms and the countercurrent transport drift bottles to the north in the fall and winter. The role of near shore currents in the dispersal of pelagic larvae of benthic invertebrates is discussed. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, longshore current, nearshore currents, wind California, Subregion II, Russian River Cell, S. Russian River Reach, Bodega Bay Cell, S. Bodega Bay Reach, Point Reyes Cell Structure of the Upper Monterey Submarine Fan Valley AUTHOR(S): Hamlin, James S., Jr. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 41 pages DATE: 09/01/74 ABSTRACT: Seismic and 3.5 kHZ acoustic reflection profiles were collected over the Monterey Submarine Fan Valley on two seperate cruises. The 3.5 kHz profiles show the flatness of the channel bottom and the difference in levee heights on either side of the channel. The seismic records show a channel migration by deposition. A secondary channel was observed beneath the western levee (righthand levee looking downstream of the Upper Monterey Submarine Fan Valley. It is believed that the Monterey Fan Valley and the secondary channel have different sources of sediment. KEYWORDS: Geomorphology geology, geomorphic processes, hydrographic surveys, sedimentation, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Developing and Demonstrating an Institutional Mechanism for Transferring Remote Sensing Technology to 14 Western States AUTHOR(S): Hankins, Donna SOURCE: Humboldt State University, Arcata, CA, Center for Community Development, 622 pages. Prepared for National Aeronautics and Space Administration DATE: 12/31/78 ABSTRACT: Original contains imagery of California coast and 13 other western states. Original photography may be purchased from the EROS Data Center, Sioux Falls, SD. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey aerial photography, beaches, remote sensing, shoreline changes, watersheds California

Mass Movement and Storms in the Drainage Basin of Redwood Creek, Humboldt County, California Progress Report AUTHOR(S): Harden, D. R.; Janda, R. J.; Nolan, K. M. SOURCE: U.S. Geological Survey, Open-File Report 78-486, 161 pages DATE: 01/01/78 ABSTRACT: Precipitation and runoff patterns for major flood-producing storms of 1953, 1955, 1964, 1972, and 1975 were analyzed to evaluate the relationship between flooding and landslide activity in the Redwood Creek basin. Precipitation and his- torical information for floods of the late 19th century were also examined in order to compare that series of storms and floods with those of the past 25 years. The results of the analysis indicate that the individual storms in a late 19th- century were similar in magnitude and spacing to those of the past 25 years. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology geomorphic processes, precipitation, river discharge, stream gaging, storms/floods California, Subregion I, Klamath River Cell Geologic Map of Redwood Creek Drainage Basin, Humboldt County, CA AUTHOR(S): Harden, D. R.; Kelsey, H. M.; Morrison, S. D.; Stephens, T. Α. SOURCE: Geological Survey, Miami, FL, Water Resources Division Journal Announcement: SWRA1612, Water Resources Abstracts, (165109 W83-04012), Minneapolis, MN DATE: 01/01/82 A 1:62,500-scale geologic map with 14 rock stratigraphic ABSTRACT: units and an accompanying explanatory text are used to describe the geology of the Redwood Creek drainage basin of northwestern California. A large part of Redwood National Park is located in the downstream part of this actively eroding drainage basin. The bedrock consists primarily of Mesozoic sedimentary and metamorphic rocks. Most major boundaries between Mesozoic rock units are north-northwest trending faults parallel to the regional structural trend. Extensive areas of surficial KEYWORDS: Geomorphology geology, maps, sedimentation, watersheds, watershed sediment California, Subregion I, Klamath River Cell Geologic Map of the Redwood Creek Drainage Basin, Humboldt County, California AUTHOR(S): Harden, D. R.; Kelsey, H. M.; Morris, S. D.; Stephens, T. A. SOURCE: U.S. Geological Survey Open-File Report 81-496, scale 1:62,500, 1 sheet DATE: 01/01/83

ABSTRACT: A 1:62,500 scale, color, geologic map of the Redwood Creek Basin with extensive descriptions of the geologic units. Very few bedding attitudes are shown on the map. References to previous workers who described the geologic units are included on the map sheet. KEYWORDS: Geomorphology geology, maps, sedimentation, watersheds, watershed sediment California, Subregion I, Klamath River Cell Variations in Runoff of California Streams; Shifting Lake Levels Give Quantitative Indications Extending Back Three Centuries AUTHOR(S): Harding, J. T. SOURCE: Civil Engineering, American Society of Civil Engineers, New York, NY, Volume 5, No. 9, September 1935, pages 572-574 DATE: 09/01/35 ABSTRACT: Quantitative estimate of runoff in California as far back as 1650. There are sufficient records to indicate that the last 75 years have had а generally greater runoff than any similar period during the last 200 to 300 years. General methods of developing the water supply of streams subject to wide variations in runoff are described. KEYWORDS: Hydrology & Hydraulics precipitation, river discharge, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Environmental Studies of Monterey Bay and the Central California Coastal Zone AUTHOR(S): Harville, John P. Moss Landing Marine Laboratories, CA, Report No. NOAA-71092818, SOURCE: 190 pages, Report on Sea Grant Program DATE: 07/01/71 ABSTRACT: The first four sections of the report provide detailed information concerning the Moss Landing Marine Laboratories data collection program for Monterey Bay, Elkhorn Slough, and the Pajaro river. These sections also outline procedures for the data collection program. Subsequent sections outline procedures for data analysis by discipline: fishes, benthic invertebrates, plankton, and sediment analysis. Final sections outline organizational and operational produres. KEYWORDS: Geomorphology, Oceanography & Meteorology climatology, environmental constraints, grain size, sedimentation, storms/floods, tidal inlets California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Sediment Yield of Coastal Basins in Northern California, 1958-1964

AUTHOR(S): Hawley, Nathan L.; Jones, B. L. SOURCE: U.S. Geological Survey Open-File Report (64-124), 19 pages DATE: 06/11/69 ABSTRACT: Results of a sediment data-collection program in the Eel, Mad, Van Duzen, and Trinity River Basins during the 7-year period October 1957 to September 1964. Indicates that sediment discharge of the Eel River was greater than any of the other three rivers. Average annual suspended-sediment discharge of the Eel River at Scotia, measuring site farthest downstream, was 13,480,000 tons. Average annual sediment yields for the Mad River near Arcata and the Van Duzen River near Bridgeville were 1,401,170 and 1,400,000 tonsrespectively. Particle size analyses show that the suspended sediment from the Eel, Mad, and Van Duzen Rivers average about 40 percent clay, 40 percent silt, and 20 percent sand. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics grain size, river-bed sediment, river discharge, river sediment discharge, stream gaging California, Subregion I, Eureka Cell Protecting the Golden Shore: Lessons from the California Coastal Commissions AUTHOR(S): Healy, Robert G.; Bantu, John S.; Clark, John R.; Duddleson, William J. The Conservation Foundation, Washington, D.C., 257 pages SOURCE: DATE: 01/01/78 ABSTRACT: The book concentrates on 1972-1976, the passage of Prop. 20 and the termination of the 1976 Coastal Act. It reaches a number of conclusions regarding the most successful and unsusccessful aspects of the Coastal program and what happens when state government takes a direct role in land use policy & control. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., property value/land use, shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Coastal Futures; Legal Issues Affecting the Development of the California Coast AUTHOR(S): Heiser, James S. SOURCE: Standard Environmental Law Society, Standard Environmental Law Annual Volume Two: 1979, 203 pages, Available at University of California, Berkeley, Water Resources Archives

DATE: 01/01/79 ABSTRACT: The articles in this annual address a number of key legal issues concerning adequate protection of the CA coast. Included is discussion of "The California Coastal Act of 1976: Allocating coastal landuse responsibilities between state and local governments. KEYWORDS: Socioeconomics environmental constraints, property value/land use, shoreline use, shore protection California, Subregion I, Subregion II, Subregion IV, Subregion V December 1964, A 400-year Flood in Northern California AUTHOR(S): Helley, Edward J.; LaMarche, V. C., Jr. SOURCE: U.S. Geological Survey Professional Paper 600-D, Pages D34-D37 DATE: 01/01/68 ABSTRACT: In both 1955 and 1964, record-breaking floods occurred over large areas of northern California. The true long-term recur- rence intervals of these destructive floods is difficult to estimate by conventional flood-frequency analysis because prediction of a given flood discharge is based solely on his- torical records of flood peaks. Geomorphic and botanical evidence of a major prehistoric flood has been investigated on Blue Creek, a tributary to the Klamath River in northern California. Radiocarbon analysis, supplemented by tree-ring counts, established a date about 400 years ago of a flood event that had about the same order of magnitude as the devastating floods of 1964. KEYWORDS: Hydrology & Hydraulics river discharge, storms/floods California, Subregion I, Klamath River Cell Field Measurement of the Initiation of Large Bed Particle Motion in Blue Creek, near Klamath, California AUTHOR(S): Helley, Edward J. SOURCE: U.S. Geological Survey professional paper 562-G, California Department of Water Resources, U.S. Government Printing Office, Washington, D.C., 19 pages DATE: 01/01/69 ABSTRACT: Purpose of the study was to determine bed velocities necessary to initiate motion of coarse bed material. Examined existing silt-versusvelocity relations. Also includes determination of channel changes due to aggradation and degradation. Illustration and tables included. KEYWORDS: Hydrology & Hydraulics maps, river-bed sediment, river sediment discharge

California, Subregion I, Klamath River Cell Fluvial Sediment Load Calculations and Their Significance to Erosion Rates. with Special Application to North Coastal California AUTHOR(S): Helley, Edward J.; Ritter, John R. SOURCE: Geological Society of America, Boulder, CO, Abstract, Volume 2, No. 2, pages 100-101 GEOREF (558389 70-10797) DATE: 01/01/70 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, river-bed sediment, river discharge, river sediment discharge. sedimentation, watershed sediment California, Subregion I, Subregion II A Preurbanization Reconnaissance Study of Lake Earl AUTHOR(S): Helley, Edward J.; Averett, Robert C. SOURCE: U.S. Geological Survey, Department of the Interior, 17 pages, (2018 - 07)DATE: 12/03/71 ABSTRACT: This study was performed to point out how urbanization would effect Lake Earl. Increased concern over the stability of the dunes bordering the lake, as well as the future quality of the water were concerns. This report includes the physical setting and water quality of Lake Earl and presents а study proposal for a full evaluation of the present water quality and the potential influence of urbanization on its shores. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Socioeconomics dunes, environmental constraints, geology, institutions/planning/mgmt., shore protection, urbanization California, Subregion I, Smith River Cell Historic Flood Information for Northern California Streams from Geological and Botanical Evidence AUTHOR(S): Helley, Edward J.; Lamarche, V. C., Jr. SOURCE: U.S. Geological Survey Professional Paper 485-E, 16 pages DATE: 01/01/73 ABSTRACT: In both 1955 and 1964, record-breaking floods occurred over large areas of northern California. The true long-term recur- rence intervals of these destructive floods is difficult to estimate by conventional flood-frequency analysis because pre- diction of a given flood discharge is based solely on histroical records of flood peaks. Geomorphic and bontanical evidence of a major prehistoric flood has been investigated on Blue Creek, a

tributary to the Klamath River in northern California. In 1968 U.S. Geological Survey Professional Paper 600-D esti- mated a recurrence interval of about 400 years for the flood of 1964. New evidence has surfaced which suggests that the devas- tating floods of 1964 were about the same order of magnitude as KEYWORDS: Hydrology & Hydraulics river discharge, storms/floods California, Subregion I, Klamath River Cell A Study to Evaluate the Dispersion Characteristics of Waste Discharges to the Open Coastal Waters of California AUTHOR(S): Hendricks, Tareah J. University of California, San Diego, Scripps Institute of SOURCE: Oceanography, La Jolla, CA, 78 pages, figures DATE: 05/01/79 Primarily a study of waste dilution at ocean outfalls off the ABSTRACT: Pacific Coast, but contains some information about California coastal currents. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V The North Coast Rivers AUTHOR(S): Herbert, Joseph, M. D. Sierra Club, San Francisco, CA, Northern California Regional SOURCE: Conservation Committee, 24 Pages DATE: 01/01/71 ABSTRACT: A review of water resources projects under the California Water Plan concentrating on the Eel, Trinity And Klamath Rivers. Data focus on environmental impact (fishing, recreation etc.); offers alternative development plans. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, growth potential/recreation, population, reservoirs, river discharge, urbanization California, Subregion I, Klamath River Cell, Eureka Cell Remote Sensing Techniques Used in Determining Changes in Coast-line AUTHOR(S): Herbich, J. B.; Hales, L. Z. SOURCE: Proceedings, Offshore Technology Conference, 1971 DATE: 01/01/71 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Survey aerial photography, remote sensing, shoreline changes California The California Current System-Hypotheses and Facts AUTHOR(S): Hickey, Barbara M. SOURCE: Progress in Oceanography, Elmsford, N.Y: Pergamon Press, Inc; Journals Division; Volume 8, 1979, pages 191-279, maps

DATE: 10/17/78 ABSTRACT: The primary purpose of this paper is to describe the seasonal variation of the various currents which comprise the California Current System these are the California Current, the California Undercurrent, the Davidson Current and the Southern California Countercurrent. Investigated the dynamical relationships among these currents. Although the majority of information was derived from existing literature, previously unpublished data are introduced to provide direct evidence of the existence of a jet-like undercurrent over the continental slope off Washington. KEYWORDS: Oceanography & Meteorology coastal currents California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Sand Dispersion From An Ephemeral River Delta On The Wave- Dominated Central California Coast AUTHOR(S): Hicks, D. M. SOURCE: University Of California, Santa Cruz, CA, Ph.D. Thesis, 210 pages DATE: 01/01/85 ABSTRACT: Discusses sediment yield from the San Lorenzo River and the modification by wave action of the delta of the San Lorenzo River. KEYWORDS: Coastal Processes littoral sediment, longshore transport, river sediment discharge, wave climate California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell, S. Monterey Bay Cell Map Showing Geophysical Tracklines, South-Central Monterey Bay AUTHOR(S): Hill, G. W.; Chin, J. L. SOURCE: U.S. Geological Survey, Open-File Report 82-837, scale 1:24,000, 1 sheet DATE: 01/01/82 Approximately 275 km of geophysical tracklines taken in ABSTRACT: southcentral Monterey Bay in July 1981, using Uniboom and minisparker seismic systems, are shown on this 1:24,000 scale map. Track- line locations were determined using a shipboard precision navigation system. The shorenormal tracklines extended seaward to about the 100 m contour and usually ended within one-half kilometer of the shoreline. Other types of data collected in this study include fathometer profiles, underwater video transects, gravity cores, and surface grab samples. KEYWORDS: Geomorphology, Survey

geology, maps California, Subregion IV, Map Showing Surface Grab Samples and Gravity Core Locations, South-Central Monterey Bay, California (July '81 - February '82 AUTHOR(S): Hill, G. W.; Chin, J. L.; Ho, B. D. SOURCE: U.S. Geological Survey Open-File Report 82-838, scale 1:24,000, 1 sheet DATE: 01/01/82 ABSTRACT: Locations of surface grab samples and gravity cores taken in southern Monterey Bay between Fort Ord and Moss Landing during July 1981 to February 1982 are shown on a 1:24,000 scale map. The samples were all taken in less than 100 m water depth. Sixteen of the samples were taken within one-half km of the coast. Gravity cores were split into archive and working halves. Archive halves were put into permanent storage in the U.S.G.S. Sedimentation Lab (Palo Alto, Ca.). Working halves were logged for lithology and structures, and then xradiographed. KEYWORDS: Geomorphology, Survey grain size, maps California, Subregion IV, S. Monterey Bay Cell A Field Study of Large-Scale Oscillation Ripples in a Very Coarse-Grained, High-Energy Marine Environment AUTHOR(S): Hirschaut, D. W. SOURCE: U. S. Geological Survey Open-File Report 82-773-, 33 pages DATE: 01/02/82 ABSTRACT: Monastery Beach, Carmel, California is a pocket beach that sits within 200 m of the head of Carmel Submarine Canyon. Coarse to verycoarse sand covers both the beach and adjacent shelf; in the latter area incoming waves have shaped the sand into large oscillation ripples. On three separate occasions, scuba divers measured ripples and collected sand samples from ripple crests near reference stakes along three shore-normal transects. Both sand grain size and ripple wavelength decreased with an increase in water depth. Sediment sorting was best closest to the surf zone and poorest at the rim of Carmel Canyon. KEYWORDS: Coastal Processes, Geomorphology beaches, beach profiles, geomorphic processes, grain size, sedimentation, submarine canyons California, Subregion IV, Carmel River Cell Beach Erosion: Stinson Beach, California

AUTHOR(S): Hisamatsu, Yoshihiko SOURCE: University of California, Berkeley, unpublished student paper, 31 pages, available at Water Resources Archives (Wiegel) DATE: 06/09/78 ABSTRACT: A study of the Stinson Beach area including dynamic forces creating a beach equilibrium profile. Also discussed are measures taken for shore protection. KEYWORDS: Coastal Processes, Socioeconomics beach profiles, coastal structures, dunes, grain size, longshore transport, shore protection California, Subregion III, Bolinas Bay Cell Beach Nourishment Techniques - Typical U.S. Beach Nourishment Projects Using Offshore Sand Deposits AUTHOR(S): Hobson, R. D. SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, Technical Report, No. 76-13, #3 of series, 117 Pages DATE: 05/01/81 This report is a compendium of beach nourishment project ABSTRACT: characteristics, for 20 typical U.S. shore segments, for which the use of beach fill sediments from offshore borrow sources areas has been suggested as a remedv for shore erosion. Data are provided to establish a basis for long-range planning of nourishment projects and systems. For each example project, the data provided consist of: history and description, location and bathymetry, fill and borrow site characteristics and specifications, design fill section, sediment grain size distributions, and fill calculations. KEYWORDS: Coastal Processes, Geomorphology beach nourishment/dredging, grain size, littoral sediment California A Study of the Physical Oceanography of the Coastal Zone Near the Sewer Outfall of the Proposed Humboldt Bay Municipal Water Authority AUTHOR(S): Hodgson, Robert T.; Pequegnat, John SOURCE: Humboldt State University, Arcata, CA, first quarterly report, 1975 DATE: 11/23/75 ABSTRACT: This report describes oceanographic studies conducted between 24 Oct. and 20 Nov. 1975. The work included a drift card experiment and a parachute drogue study. The analysis of a diffusion experiment was presented as a supplement to this report. The dynamics of nearshore circulation between Trinidad Head and Cape Mendocino were not well understood. Although general features of the large scale, offshore circulation are known, the details of

oceanic processes become obscure as one approaches the coast. This report attempts to develop the role of winds, tides and seasonal effects on the nearshore KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, longshore current, nearshore currents, tides, wind California, Subregion I, S. Klamath River Reach, Eureka Cell, S. Eureka Reach Shore and Beach Siltation Study of Humboldt Bay Marina AUTHOR(S): Hodgson, Robert T.; Sullivan, Stephen M. SOURCE: Shore and Beach, Journal of the American Shore and Beach Preservation Association, O'Brien Hall, University of California, Berkeley, CA, Volume 46, No. 1, Page 21-27 DATE: 01/01/78 ABSTRACT: Siltation Study of Humboldt Bay Marina, California. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Survey hydrographic surveys, maps, precipitation, river sediment discharge, sedimentation, tides California, Subregion I, Eureka Cell Floods of December 1955 - January 1956, in the Far Western States, Part 1, Description AUTHOR(S): Hofmann, Walter; Rantz, S. E. U.S. Geological Survey Water-Supply Paper 1650-A, 156 pages SOURCE: DATE: 01/01/63 ABSTRACT: The floods of December 1955-January 1956 in the Far Western States were in many respects the greatest in the area since history of recorded streamflow was recorded. In all but a few ares, the storm of Dec. 21-24 was the most severe. The coastal area of northern California and southern Oregon had measurable rainfall on 38 of the 43-day periods from Dec. 15 to Jan 27. This report includes descriptions of the precipita- tion, stream discharges, and stream stages in central and northern California during the storms. The effectiveness of reservoirs in mitigating the peak flood charges is also addressed in the report. More detailed information on the hydrology during the floods is given in the companion Water-KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, reservoirs, river discharge, stream gaging, storms/floods California, Subregion I, Subregion II, Subregion IV, Subregion IV California Beach Erosion studies AUTHOR(S): Hogan, Schoch, and Associates, Inc. SOURCE: Hogan Schoch & Associates Inc., Sebastopol, CA, 2 leaves, 6 folded sheets DATE: 01/01/67 Seasonal beach changes at Jenner, California, on the Russian ABSTRACT: River

(2 range lines), taken on September 26, 1967; December 21, 1967; March 29, 1968; September 24, 1968; June 28, 1968 and December 30, 1969. KEYWORDS: Coastal Processes, Survey beach profiles, coastal erosion, shoreline changes California, Subregion II, Russian River Cell A Study of Marked Sand Movement on Del Monte Beach, Monterey Bay, California AUTHOR(S): Hohenstein, Gilbert C.; Yaeger, Walter J.; Jones, David L. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis DATE: 01/01/65 ABSTRACT: The movement of fluorescent-coated sand on Del Monte Beach, Monterev Bay, California was traced for a three-week period during February and March, 1965. In order to speed analysis of hundreds of sediment samples, a rapid volumetric measurement was developed to replace the standard weight measurement in textural analysis. Marked sand grains in different size ranges were found to move in different directions, both along and across the beach. No dominant longshore drift occurred. The observed movement of the sand correlated with the natural sand texture, beach profile changes, and the presence of cusps. KEYWORDS: Coastal Processes, Survey beaches, beach profiles, grain size, littoral sediment, longshore transport, shoreline changes California, Subregion IV, S. Monterey Bay Cell Type 16 Flood Insurance Study: Tsunami Predictions for Pacific Coastal Communities AUTHOR(S): Houston, James R.; Garcia, Andrew W. SOURCE: USACE, Waterways Experiment Station, Vicksburg, MS, 139 pages, Report No. AEWES-TR-H-74-3 (AD-785 533) DATE: 05/01/74 Calculations of runup due to seismic sea waves (tsunamis) of ABSTRACT: distant origin are made for 15 coastal communities within the state of California and 3 coastal communities within the state of Alaska. The values given are interpreted as being equaled or exceed on the average of once per 100 or once per 500 years, whichever is indicated. The combined effects of astronomical tides and tsunamis are incorporated into the analysis as well as local resonance effects where judged significant. A complete discussion of the methodology is presented. KEYWORDS: Coastal Processes, Oceanography & Meteorology, coastal structures, tides, tsunamis, urbanization

California, Subregion I, Subregion II, Subregion IV, Subregion V Effect of Source Orientation and Location in the Aleutian Trench on Tsunami Amplitude Along the Pacific Coast of the Continental United States AUTHOR(S): Houston, James R.; Whalin, Robert W.; Garcia, Andrew W.; Butler, H. Τι. SOURCE: USACE, Waterways Experiment Station, Hydraulics Laboratory, Vicksburg, MS, Research Report H-75-4, 48 pages DATE: 07/01/75 ABSTRACT: An investigation to determine the effect of orientation and 10cation of tsunamigenic ground displacements of earthquakes along the Aleutian Trench on resulting tsunami amplitude along the Pacific coast of the continental United States. The Aleutian Trench was partitioned into 12 segments and а hypothetical ground displacement was centered in each segment. A numerical model was used to propagate the tsunami. An analytical solution was used to propagate the tsunami from the grid point of the numerical grid closest to land to a common water depth of 600 KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis California Tsunami Runup Predictons for the West AUTHOR(S): Houston, James R. SOURCE: Coastal Zone `78: Symposium of Technical, Environmental, Socioeconomic, and Regulatory Aspects of Coastal Zone Mgmt., Vol IV, pages 2885-2896, American Society of Civil Engr., New York, NY DATE: 03/14/78 ABSTRACT: This paper describes the use of numerical models to propagate tsunamis from tsunamigenic regions to the west coast of the United States. A method also is described that incorporates these deterministic numerical model calculations into a probabilistic analysis that allows elevation predictions at any location on the west coast. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology tsunamis California, Subregion I, Subregion II, Subregion IV, Subregion V Type 16 Flood Insurance Study: Tsunami Predictions for the West Coast of Continental United States AUTHOR(S): Houston, James R.; Garcia, Andrew W.

SOURCE: USACE, Engineer Waterways Experiment Station, Hydraulics Laboratory, Vicksburg, MS, Technical Report H-78-26 DATE: 12/01/78 ABSTRACT: Calculations of runup due to tsunamis of distant origin were made for most of the west coast of the continental United States. Runup values were determined that were expected to be equaled or exceeded once per 100 or once per 500 years. Historical data of tsunami activity in distant generation regions were used in the investigation in conjunction with numerical models that generated tsunamis and propagated them across the deep-ocean and nearshore region. The combined effects of astronomical tides and tsunamis were also incor- porated into the analysis. Numerical simulations of actual historical tsunamis and comparisons of calcualtions with tide gage KEYWORDS: Coastal Processes, Oceanography & Meteorology tides, tsunamis California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V A Numerical Model for Tsunami Inundation AUTHOR(S): Houston, James R.; Butler, H. L. SOURCE: USACE, Waterways Experiment Station, Vicksburg, Mississippi, Report No. WES-TR-HL-79-2, 60 pages DATE: 02/01/79 A two-dimensional and time-dependent numerical model was ABSTRACT: developed that calculates the land inundation of a tsunami. The model solves long wave equations that include bottom friction terms. A coordinate transformation was used to allow the model to employ a smoothly varying grid that allows cells to be small in the inundation region and large in the ocean. The model was verified by simulating the 1964 Alaskan tsunami at Crescent City, California. An application of the model to calculate inundation in a region of Hawaii is presented. KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis California, Subregion I, S. Smith River Reach Tsunamis, Seiches and Landslide-Induced Water Waves AUTHOR(S): Houston, James R. SOURCE: USACE, Waterways Experiment Station, Hydraualics Laboratory, Vicksburg, MS, Report 15 of a series, State-of-the-Art for Assessing Earthquake Hazards in the U.S., Misc. Paper S-73-1 DATE: 11/01/79 ABSTRACT: State-of-the-art methods are presented to assess the hazards of

tsunamis, seiches, and landslide-induced water waves in the United Sates. Tsunami hazard maps for the United States are shown that display tsunami elevation zones that have a 90 percent probability of not being exceeded in a 50-year period. Methods used to determine forces exerted on structures by tsunamis are described. Hydrodynamic aspects of seiches and landslideinduced water waves are discussed, as well as methods of assessing the hazards associated with these phenomena. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics maps, storm damage, tsunamis California, Subregion I, Subregion II, Subregion IV, Subregion V Engineer's Report to the Del Monte Properties Company on Tidal and Current Investigations in the Southerly Portion of Monterey Bay/Harbor, CA, 1926 AUTHOR(S): Howe and Price SOURCE: Howard Price, Consulting Engineers, San Francisco, California, 59 leaves, illustrations, photos DATE: 04/15/26 This is a complete and comprehensive study of the tides, ABSTRACT: currents and winds in Monterey Bay Harbor over a three month period. Also in the report are six large scale blue print maps of float tests, showing the length and direction of travel, and in many cases, the final point of stranding of the various types of floats used in the test. The report was prepared because of concern over the wastes from fish canneries and sewage polluting Monterey Bay. KEYWORDS: Coastal Processes, Oceanography & Meteorology maps, nearshore currents, tides, wind California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Wave Damage Along the California Coast, 1977-1978 AUTHOR(S): Howe, Steve SOURCE: California Coastal Commission, San Francisco, CA, 61 pages DATE: 01/01/78 ABSTRACT: Information derived from a study of 1977 California coast wave damages. The report is based on a study of that winter's storm wave conditions, wave damages, and the government response to these conditions. The report includes a description of the storm conditions; a documentation of wave damages and associated costs at selected sites; detailed documentation of all reported wave damages in California during the winter of 1977-78; and descriptions of data collection methodology, calculations, and references.

KEYWORDS: Coastal Processes, Socioeconomics storm damage, storm waves California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Sand Movement Along Carmel River State Beach, Carmel, CA AUTHOR(S): Howell, Buford F. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 67 pages, Water Resources Abstracts (059850 W73-11557), Minneapolis, MN: Environmental Hydrology Corporation DATE: 09/01/72 ABSTRACT: The direction of sand movement along the Carmel River State Beach in California was qualitatively determined by diving observations, a bathymetric survey, wave refraction diagrams and sediments size analysis of 18 samples. The primary source of sediments for the beach appears to be the Carmel River which flows only seasonally. Sedimentary material is introduced into the bay after winter precipitation provides sufficient amount of runoff to warrent the opening of the river mouth by bulldozer. The fine sedimentary material is lost offshore and the coarser material is either redeposited on the beach or is carried south with the littoral drift and deposited at a nodal KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey grain size, hydrographic surveys, littoral sediment, longshore transport, river sediment discharge, wave transformation California, Subregion IV, Carmel River Cell, S. Carmel River Reach A Study of Time Variability of Surface Currents at a Point in Monterey Bav AUTHOR(S): Howton, Harry M. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 114 pages (AD-756 574) DATE: 12/01/72 ABSTRACT: The geomagnetic electrokinetograph (GEK) was used to measure surface currents near the center of Monterey Bay during six separate 24-hour periods from May through July, 1972. An average of 244 current vectors were derived for each cruise. The mean currents from these cruises are all southerly and ranged from 4.1 cm/ sec to 20.4 cm/sec. These values were compared with individual currents derived from dynamic topographies from the same period. KEYWORDS: Oceanography & Meteorology coastal currents, nearshore currents, tides California, Subregion IV, Santa Cruz Cell,

Simulation Study of the North Pacific Ocean AUTHOR(S): Huang, J. C. K. SOURCE: From symposium on Modeling of Transport Mechanisms in Oceans and Lakes, Burlington, Ontario, 1975. Proceedings, Canada, Marine Sciences Directorate, Department of Fisheries and Environment DATE: 01/01/77 ABSTRACT: Numerical studies of large-scale motions in the North Pacific Ocean were carried out using a three-dimensional, nonlinear dynamic model. The model is based on the thermo-hydrodynamic equations for an incompressible fluid contained in a basin with realistic boundary configurations. Observed atmospheric data such as the air temperature, the relative humidity and the wind, etc., are coupled with the predicted surface temperature and salinity to compute the heat, water and momentum fluxes across air-sea interface from empirical formulas. The computed values are used as the constraining upper boundary conditions for the ocean model. Results show realistic circulation patterns and KEYWORDS: Oceanography & Meteorology coastal currents, nearshore currents, wind California, Subregion I, Subregion II, Subregion IV Description of Beds Exposed at Fort Funston, Golden Gate Nation- al Recreation Area, Northwestern San Francisco Peninsula, CA AUTHOR(S): Hunter, R. E.; Clifton, H. E. SOURCE: U.S. Geological Survey Open-File Report 82-1055, 30 pages DATE: 01/01/82 ABSTRACT: A thick section of Pleistocene beds is exposed in wave-cut bluffs on the northwestern San Francisco Peninsula, California. These exposures extend from near Fleishhacker Zoo on the north to near Mussel Rock, where the San Andreas fault intersects the shoreline, on the south. Although the intention of this report is to describe the geology of the cliffs, grain-size information for the units is also given allowing the volume of beach materials supplied by the cliffs to be estimated if bluff erosion rates are known. KEYWORDS: Geomorphology cliff sediment, geology, grain size California, Subregion III, San Francisco Cell Heavy Mineral Analysis of Selected Monterey Bay Cores AUTHOR(S): Hunter, William P. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 55 pages (AD-722 559) DATE: 03/01/71 ABSTRACT: This study was conducted to identify heavy minerals and their

changes with depth in three cores taken from different locations in Monterey Bay, California. Monterey Bay provides an area where several different sources influence the sediment depo- sition. Minerals indicative of the geological formations in the drainage areas of the Pajaro and Salinas Rivers were found in distinctive distribution throughout these cores. The larger percentages of augite found in the core at Santa Cruz were probably derived from the north due to longshore drift. High percentages of garnet and low percentages of hypersthene with depth in the Moss Landing Core reflect the influence of the Salinas River. KEYWORDS: Coastal Processes, Geomorphology geomorphic processes, littoral sediment, longshore transport, petrology, river sediment discharge, sedimentation California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Mineralogy of Beach Sands Between Halfmoon and Monterey Bays, California AUTHOR(S): Hutton, Osborne C. California Department of Natural Resources, Division of Mines, SOURCE: Sacramento, CA, Special Report 59, 32 pages DATE: 01/01/59 ABSTRACT: Study of the heavy mineral assemblages in beach sands from the north end of Half Moon Bay to Pacific Grove over a three-year period. Methods used in fractionation of heavy minerals include elutriation, flotation in heavy liquids, electromagnetic and separation and hand picking. Complete chemical analysis of biotite, monaite, and thorite were made. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment, petrology California, Subregion III, Subregion IV, Half Moon Bay Cell, S. Half Moon Bav Reach-A, S. Half Moon Bay Reach-B, Santa Cruz Cell, S. Monterey Bay Cell Outline of an Investigation of Various Factors Affecting the Interests of the Del Monte Properties Company AUTHOR(S): Hyde, Charles G. SOURCE: Del Monte Properties Company, Pacific Grove, CA, 10 pages, diagrams, manuscript DATE: 10/01/25 ABSTRACT: Outline of a comprehensive investigation of the character and quality of the waters of the southerly portion of Monterey Bay (Monterey Harbor, California); of the direction and velocity of the currents therein; and of certain other factors affecting the interests of the Del Monte Properties Company

KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, environmental constraints, nearshore currents California, Subregion IV, S. Monterey Bay Cell Coastal San Mateo County Investigation AUTHOR(S): Hyde, John L. SOURCE: California Department of Water Resources, Sacramento, CA, Bulletin No. 138, 321 pages, figures DATE: 03/01/66 ABSTRACT: An investigation to assess existing water resources in San Mateo County and to evaluate the potential for development of these resources in the next 10 years. Topics included are: descrip- tion of geography, description of urban and agricultural deve- lopment , recreation resources, urban and agriculture water requirements, precipitation, surface and ground water hydrology, geological conditions, evaluation of existing storage facilities, and financing possibilities for proposed development plan. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics geology, growth potential/recreation, California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell, S. Half Moon Bay Reach-A Assessing the Impact of the California Coastal Plan on Commercial and Residential Development AUTHOR(S): ICF Associates SOURCE: Review of Calif. Coastal Plan, Vol. II, Supporting Docs, Final Report of the Joint Legislative Budget Comm., available at the University of California, Berkeley, Water Resources Archives DATE: 03/01/76 ABSTRACT: Study on the initial assessment of the impact of recommended Coastal Plan policies on residential and commercial develop- ments. Impact being defined as the costs that accrue to a residential or commercial developer when placing his product on the market and benefits that accrue to the public as a result of these costs. KEYWORDS: Socioeconomics property value/land use, urbanization California, Subregion I, Subregion II, Subregion IV, Subregion V Geostrophic Eddies in the Ocean. Part I AUTHOR(S): Ichiye, T. SOURCE: Lamont Geological Observatory, Palisades, NY, Report No. CU-21-65-AT (30-1) 2663; CU-14-65-nonrz66 (48), 10 pages DATE: 08/01/65 ABSTRACT: The results of observations of eddies with dimensions of several

kilometers to a few hundred kilometers are reviewed. Detailed measurements of an eddy off California revealed the quasi-geo- strophic structure of the eddy of intermediate size. Generation of eddies and perturbations in the ocean due to moving meteorological disturbances are explaned from examples. Dynamics on development of eddies due to a shearing instability are briefly reviewed. KEYWORDS: Oceanography & Meteorology climatology, coastal currents, nearshore currents, wind California, Mexico The Movement of Beach Sand AUTHOR(S): Ingle, J. C. SOURCE: Elsevier Publishing Company, New York, NY DATE: 01/01/66 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes beaches, littoral sediment, longshore transport California Littoral Processes and the Development of Shorelines AUTHOR(S): Inman, Douglas L.; Frautschy, J. D. Scripps Institute of Oceanography, La Jolla, CA; Coastal SOURCE: Engineering Santa Barbara Specialty Conference, Oct `65, American Society of Civil Engineers, New York, NY, pages 511-536 DATE: 10/01/65 ABSTRACT: Basic principles bearing on the nature of beaches and processes that act to modify them are considered in the light of present coastal development demands. A working hypothesis is developed that applies the principle of the conservation of mass to the mechanics of granular-fluid media. This hypothesis appears to have general application to sand transport processes in the littoral zone. KEYWORDS: Coastal Processes beaches, cliff sediment, littoral sediment, longshore transport, offshore/onshore transport, river sediment discharge California The Coastal Challenge AUTHOR(S): Inman, Douglas L.; Brush, B. M. SOURCE: Science, American Association for the Advancement of Science, Washington, D.C., Vols 181, No. 4094, Pages 20-32 DATE: 01/01/73 ABSTRACT: Not Reviewed. KEYWORDS: Coastal Processes coastal erosion, littoral sediment, longshore transport, river sediment discharge California

Status Of Surf Zone Sediment Transport Relations

AUTHOR(S): Inman, Douglas L. SOURCE: Proceedings, Workshop On Coastal Sediment Transport With Emphasis On The National Sediment Transport Study, University of Delaware, Sea Grant Report, DEL-SG-16-78 DATE: 01/01/78 ABSTRACT: Longshore transport of sand by waves. Not reviewed. KEYWORDS: Coastal Processes littoral sediment, longshore transport, wave climate California Summary Report of Man's Impact on the California Coastal Zone AUTHOR(S): Inman, Douglas L. SOURCE: California Department of Boating and Waterways, The Resources Agency, Sacramento, CA, 150 pages, maps, illustrations DATE: 06/01/80 This report summarizes information necessary to understand ABSTRACT: nearshore processes; outlines some principles of coastal zone planning that are compatible with these natural processes; and presents recommendations for correcting specific coastal problems. Santa Cruz Harbor and Bolinas Lagoon are discussed in detail. KEYWORDS: Coastal Processes, Socioeconomics coastal erosion, institutions/planning/mgmt., littoral sediment, longshore transport, river sediment discharge, wave climate California, Subregion III, Subregion IV, S. Drakes Bay Reach, Bolinas Bay Cell, Santa Cruz Cell Inventory of Environmental Factors and Expected Impact of the Proposed Pipeline Extension at Moss Landing, California AUTHOR(S): Intersea Research Corporation Pacific Gas and Electric Company, Department of Engineering SOURCE: Research, San Ramon, CA, prepared by Intersea Research Corporation, San Diego, CA, Appendix B DATE: 09/21/73 ABSTRACT: Calculated wave heights and wave induced longshore current for the proposed pipeline extension at Moss Landing, California. KEYWORDS: Coastal Processes longshore current, wave climate California, Santa Cruz Cell, S. Monterey Bay Cell Preliminary Investigation, Littoral Drift Characteristics Bolinas Lagoon, California AUTHOR(S): Interstate Electronics Corporation SOURCE: Interstate Electronics Corporation, Anaheim, CA, Oceanics Report 455-027, 64 pages, available at University of California, Berkeley, Water

Resources Archives DATE: 02/01/68 ABSTRACT: A study of literature applicable to littoral drift characteristics of the Bolinas Bay and Lagoon area. This report compares Bolinas Bay with the littoral characteristics of other locations to assess rate and direction of littoral drift, areas of erosion and deposition and seasonal variation. Illustrations and tables included. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, geology, littoral sediment, longshore transport, wave climate California, Subregion III, Water-Quality Investigation, Salinas River, California AUTHOR(S): Irwin, G. A. U.S. Geological Survey, Water-Resources Investigation 76-110, SOURCE: 41 pages DATE: 01/01/76 ABSTRACT: The concentration of dissolved solids in the Salinas River is variable and ranges from 164 to 494 milligrams per liter near Bradley and from 170 to 1,090 milligrams per liter near Spreck-les. The higher concentrations near Spreckles are caused mainly by sewage inflow about 50 m upstream. The bulk of the data presented is water chemistry information. KEYWORDS: Geomorphology, Hydrology & Hydraulics environmental constraints, river discharge, river sediment discharge California, Subregion IV, S. Monterey Bay Cell Beach and Surf Conditions at Carmel Beach July 24, 1945. AUTHOR(S): Isaacs, John D. SOURCE: University of California, Berkeley, College of Engineering, Fluid Mechanics Laboratory, 5 leaves, Illustrations, photos, folding plates, (Its HE-116-178) DATE: 10/26/45 ABSTRACT: On July 24, 1945, the following observations and surveys were made at Carmel Beach, California: profiles, surf observation, littoral current, photographs, followed by a discussion of beach and surf conditions. KEYWORDS: Coastal Processes, Survey aerial photography, beach profiles, grain size, longshore current, wave climate, wave transformation California, Subregion IV, Carmel River Cell Beach and Surf Conditions at Point Joe Bight AUTHOR(S): Isaacs, John D. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, 2 leaves, photos, (HE-116-183) DATE: 11/01/45

ABSTRACT: On July 26, 1945 a brief survey was initiated at Point Joe Bight on Seventeen Mile Drive near Monterey, California. Profiles, sand samples, tire impressions, surf and littoral current obser- vations were taken. A discussion of the survey is included. KEYWORDS: Coastal Processes, Survey beach profiles, grain size, longshore current, wave climate, wave transformation California, Subregion IV, Carmel River Cell Beach and Surf Conditions at Halfmoon Bay, July 17 and 18, 1945 AUTHOR(S): Isaacs, John D. SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 2 leaves, photos, illustrations (HE-116-181) DATE: 11/23/45 ABSTRACT: On July 17, 1945, a survey of beach and surf conditions was initiated at Halfmoon Bay, California. Profiles, sand samples, tire impressions, surf observations, and littoral current were investigated. Α discussion of the survey is included. KEYWORDS: Coastal Processes, Survey beach profiles, grain size, longshore current, wave climate, wave transformation California, Subregion III, Half Moon Bay Cell Hydrography at Monterey Bay AUTHOR(S): Isaacs, John D. SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 9 leaves, tables, photos, plates (HE-116-200) DATE: 10/09/46 ABSTRACT: This is a report on hydrography at Monterey Bay which includes profiles, sand samples, use impressions, littoral current, and photographs followed by a discussion. This was done by a field party that visited beaches at Fort Ord and Monterey on July 20, 23, and 25, 1945 in accordance with the program described in report HE-116-50 entitled, "Abbrevated Study of Beaches." KEYWORDS: Coastal Processes, Survey aerial photography, beach profiles, grain size, hydrographic surveys, longshore current, shoreline use California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Reconnaissance of Miscellaneous Pacific Beaches. AUTHOR(S): Isaacs, John D. SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 45 leaves, photos, HE-116-223 DATE: 10/22/46 ABSTRACT: This report contains photographs of various beaches along the

Pacific Coast. KEYWORDS: Coastal Processes, Survey beaches California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Preliminary Report on Harbors, Havens, and Anchorages of the Pacific Coast from San Francisco to the Straits of Juan de Fuca AUTHOR(S): Isaacs, John D. SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 1 volume (unpaged), photos DATE: 10/31/46 ABSTRACT: This report was prepared as a guide to oceanographic investigations, facilities, sites for the installation of instruments, and small boat operations along the Pacific Coast. An attempt was made to cover all of the primary and second- ary entrances from San Francisco to the Straits of Juan de Fuca. The captions on the photographs present the general information and constitute the bulk of the report. The author has person-ally negotiated every passable entrance in a small craft (with the exception of Bolinas and Mendocino Bavs) and has sheltered in the havens. KEYWORDS: Coastal Processes, Oceanography & Meteorology aerial photography, coastal structures, sand bars, shoreline use, tidal inlets California, Subregion I, Subregion II, Subregion III Records of Waves on the Pacific Coast of California and Oregon AUTHOR(S): Isaacs, John D.; Schorri, Saadia SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 3 volumes, illustrations, tables, folded plates, includes appendix and addendum (HE-116-263) DATE: 07/10/47 ABSTRACT: The University of California designed and installed 2 instruments off the coast at Pt. Sur California, and Heceta Head Oregon, which gave a continuous record of the height and character of the sea. An appendix includes refraction diagrams, gives general information on wind waves, swells and marine operations. Several tables on the character of the sea are included. KEYWORDS: Coastal Processes storm waves, wave climate, wave transformation California, Oregon, Subregion V, Point Sur Cell, S. Point Sur Reach

A Comparison Between Recorded and Forecast Waves on the Pacific Coast AUTHOR(S): Isaacs, John D.; Saville, Thorndike Jr.

SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 6 leaves, illustrations, HE-116-285 DATE: 05/17/48 ABSTRACT: This paper gives a brief history of the theory of forecasting ocean waves. The author concludes that existing forecasting technique results in a high degree of reliability for fore- casting the arrival of significant increases in wave height, and prognosticating the wave heights. KEYWORDS: Coastal Processes wave climate, wave transformation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Recent Sediments of Bolinas Bay, California Part A, Introduction and Grain Size Analysis AUTHOR(S): Isselhardt, Courtney; Osuch, L.; Wilde, Pat SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, College of Engineering, Part A, (one of three parts) 55 pages, HEL-2-19 DATE: 11/01/68 Part of a long-term study of sediment transport on the ABSTRACT: Continental Shelf of Central California. Three types of samples are examined in this report: a. 6 rock samples from cliffs of Bolinas Bay, b. 12 beach samples, and c. 44 marine rock and sediment samples from Bolinas Bay. Maps, graphs and charts included. KEYWORDS: Coastal Processes, Geomorphology beaches, cliff sediment, geology, grain size, littoral sediment California, Subregion III, Bolinas Bay Cell Recent Sediments of Bolinas Bay, California, Part B. Mineralogi- cal Data AUTHOR(S): Isselhardt, Courtney; Osuch, L.; Wilde, P. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, College of Engineering, 1 envelope containing, tables, graphs, handwritten material published as HEL-1-2-19, 55 pages DATE: 11/01/68 ABSTRACT: Contains grain size data of recent sediments of Bolinas Bay and a map, scale 1:20,000, of Bay Project GK-27524. Handwritten data on the beach and cliff samples. KEYWORDS: Coastal Processes, Geomorphology cliff sediment, geology, grain size, littoral sediment, maps, petrology California, Subregion III, Bolinas Bay Cell Recent Sediments of Bolinas Bay California, Part B. Mineralogy Data

AUTHOR(S): Isselhardt, Courtney; Osuch L.; Yancey, T.; Wilde, P. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory,

College of Engineering, Part B (one of three parts), 155 pages, (HEL-2-22) DATE: 04/01/69 ABSTRACT: This part of a study of Bolinas Bay involves the heavy mineralogy of 49 sediment samples. Graphs are used to illustrate the findings. Grain size and heavy mineral analyses of 6 cliff, 12 beach, and 44 marine sediment and rock samples from Bolinas Bay. Part of a study of sediment transport on the continental shelf off Central California. Mineralogical Data is in tables and graphs. KEYWORDS: Coastal Processes, Geomorphology cliff sediment, geology, grain size, littoral sediment, maps, petrology California, Subregion III, Bolinas Bay Cell Redwood National Park Studies, Data Release Number 1, Redwood Creek, Humboldt County, California, September 1, 1973-April 10, 1974 AUTHOR(S): Iwatsubo, R. T.; Nolan, K. M.; Harden, D. R. SOURCE: U.S. Geological Survey Open-File Report, p. 175 DATE: 01/01/75 This report presents a tabulation of the data collected in ABSTRACT: the Redwood Creek drainage basins between September 1, 1973, and April 10, 1974, and a brief description of the conditions of the study area at the time of data collection. Most of the data was collected during the winter stormrunoff period. Stream discharge and water quality data were collected at 27 stations. Measurements included the following variables: (1) stream stage and discharge; (2) sediment size and concentrations; and (3) the chemical, physical, and biological characterictics of the water. KEYWORDS: Geomorphology, Hydrology & Hydraulics, environmental constraints, grain size, precipitation, river-bed sediment, river discharge, river sediment discharge California, Subregion I, Klamath River Cell Redwood National Park Studies, Data Release Number 2, Redwood Creek, Humboldt County, and Mill Creek, Del Norte County, CA AUTHOR(S): Iwatsubo, R. T.; Nolan, K. M.; Harden, D. R.; Glysson, G. D. SOURCE: U.S. Geological Survey Open-File Report 76-678, 247 pages DATE: 01/01/76 ABSTRACT: This report, the second in a series, presents a tabulation of the data collected in the Redwood Creek and Mill Creek drainage basins between April 11, 1974, and September 30, 1975 and a brief description of the conditions of the study area at the time of data collection. Most of the data was collected

during the winter storm-runoff period. This report presents physical data including: (1) stream-channel cross sections, (2) a map of erosional landforms, (3) precipitation, (4) stream stage and discharge, (5) turbidity, (6) suspended-sediment and bedload discharges. KEYWORDS: Geomorphology, Hydrology & Hydraulics, grain size, precipitation, river-bed sediment, river discharge, river sediment discharge, stream gaging California, Subregion I, Klamath River Cell Dating and Recurrance Frequency of Prehistoric Mudflows Near Big Sur, Monterey County, California AUTHOR(S): Jackson, L. E. Jr. SOURCE: U.S. Geological Survey, Journal of Research, Volume 5, No. 1, pages 17-32 DATE: 01/01/77 ABSTRACT: Botanical evidence based on the dendrochronology and root horizons of redwoods and radiocarbon dating were used to date prehistoric mudflows near Big Sur. At least three periods of mudflow activity were delineated for the prehistoric period 1370-1800. Two historic periods of mudflow activity have occurred, 1908-1910 and 1972-73. The documentation of mudflows as characteristic surficial processes in the Santa Lucia Range indicates a hazard to development on recent mudflow deposits in this region. KEYWORDS: Geomorphology fires, geomorphic processes California, Subregion V, Point Sur Cell Design for Rubble Mound Breakwater, Noyo Harbor, California, Hydraulic Model Investigation AUTHOR(S): Jackson, Ruth A. USACE, Waterways Experiment Station, Vicksburg, MS, August 1966 SOURCE: DATE: 08/01/66 ABSTRACT: Hydraulic Model investigation for proposed north and south breakwater at Noyo Harbor. Stability tests were conducted to select the optimum breakwater design for different reaches of the proposed breakwater. KEYWORDS: Coastal Processes coastal structures, wave climate California, Subregion II, S. Ten Mile River Reach Combing the Coast II, Santa Cruz to Carmel: A Lively Guide to Beaches, Backroads, Parks, Historic Sites and Towns AUTHOR(S): Jackson, Ruth A. SOURCE: Chronicle Books, San Francisco, CA, C 1982, VIII, 136 pages DATE: 01/01/82 ABSTRACT: Travel and quidebook with description of coast. KEYWORDS: Socioeconomics

beaches, maps, shoreline use, urbanization California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Eighteenth Hole, Pebble Beach Shoreline Erosion Study, (submitted to) Del Monte Properties Company, Pacific Grove, CA AUTHOR(S): James A. Roberts Associates SOURCE: James A. Roberts Associates, Carmichael, California, 114 pages, photos, maps, diagrams DATE: 03/15/74 ABSTRACT: Wave action along the shore of Still-Water Cove, coupled with man's activities, resulted in the erosion and almost complete disappearance of part of Pebble Beach. Widening of natural cracks and joints in the shoreline bedrock have occured. The erosion could have resulted in eventual damage to the eighteenth tee, eigtheenth green, private residential dwellings, and the Pebble Beach Beach Club. The purpose of the study was to determine the extent and sequence of erosion at the Eighteenth Hole and to determine the principal causes of this erosion. KEYWORDS: Coastal Processes, Socioeconomics coastal erosion, coastal erosion problems, offshore/onshore transport, shoreline use, shore protection California, Subregion IV, Carmel River Cell Middle Fork Eel River Watershed Erosion Investigation AUTHOR(S): James, Stephen M.; Sommarstram, Sari California Department of Water Resources, The Resources Agency, SOURCE: Sacramento, CA, 221 pages DATE: 10/01/82 Purpose of study was to collect basic data on the sources of ABSTRACT: sediment and causes of erosion in the Middle Fork, Eel River Basin, and to record watershed conditions. Maps are included. KEYWORDS: Geomorphology, Hydrology & Hydraulics fires, geology, precipitation, river sediment discharge, watersheds, watershed sediment California, Subregion I, Eureka Cell South Fork, Eel Watershed Erosion Investigation AUTHOR(S): James, Stephen M. SOURCE: California Department of Water Resources, The Resources Agency, Sacramento, CA, 89 pages, appendix, photos, illustrations, maps, folding plate in pocket DATE: 07/01/83 ABSTRACT: The purpose of this study was to collect data on the sources of

sediment in the South Fork Eel River and to record watershed conditions. These data updated existing baseline data and served as a basis for comparison in future studies. A biblio- graphy, a geology map, a landslide map, and hydrologic data, were compiled and turbidity data were collected. KEYWORDS: Geomorphology, Hydrology & Hydraulics geology, maps, precipitation, river sediment discharge, watersheds, watershed sediment California, Subregion I, Eureka Cell Watershed Conditions in the Drainage Basin of Redwood Creek, Humboldt County, California, As of 1973 AUTHOR(S): Janda, R. J.; Nolan, K. M.; Harden, D. R.; Colman, S. M. SOURCE: U.S. Geological Survey, Open-File Report, 75-568, 266 pages DATE: 01/01/75 This report describes the physical condition of the drainage ABSTRACT: basin of Redwood Creek as of 1973, and identifies processes that are modifying or are threatening to modify the Redwood National Park ecosystem. The major topics are geology, physiography, climate, vegetation, and streamflow of the Redwood Creek basin. Sections addressing the rate of suspended load and bedload transport do not include grain-size information. Data collected in 1974 at six sites along Redwood Creek, as well as data from similar nearby streams, suggest that bedload probably accounts for 15 to 35 percent of the total sediment load of Redwood Creek. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology geology, precipitation, river discharge, river sediment discharge, stream gaging, watersheds California, Subregion I, Klamath River Cell Summary of Watershed Conditions in the Vicinity of Redwood National Park, California AUTHOR(S): Janda, R. J. SOURCE: U.S. Geological Survey, Open-File Report 78-25, 81 pages DATE: 01/01/78 ABSTRACT: In 1977 the Chairman of the Senate Subcommittee on Parks and Recreation requested that the U.S. Geological Survey summarize its recent findings on the watershed conditions in the vicinity of Redwood National Park, California. This report synthesizes the key facts and ideas of previous reports, and updates the data to include more recent observations. The impact of major channel-modifying floods on suspended sediment discharge is addressed. It was found that in the short term, one major flood can discharge more

suspended sediment than years of non-flood conditions. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics geomorphic processes, river discharge, river sediment discharge, watersheds California, Subregion I, Eureka Cell Stream Sediment Discharge in Northwestern CA. Field Trip to Observe Natural and Management-Related Erosion in Franciscan Terrane of N. CA. AUTHOR(S): Janda, R. J.; Nolan, K. M. SOURCE: Geological Society of America, Cordilleran Section, (San Jose, CA), 1979, Field Trip Guidebook, pages IV1-IV27 DATE: 01/01/79 ABSTRACT: This article was background for discussion among field trip participants. The article summarizes available sediment discharge rates, presents some reasons for high regional sediment-discharge rates, and discusses briefly some possible implications of those high rates. Also included is а table summarizing U.S.G.S. data on water and suspended-sediment discharges for selected rivers of northwestern California and a table summarizing U.S.G.S. data on measured annual suspended- sediment and bedload discharge between 1973 and 1977 for selected rivers of northwestern California. KEYWORDS: Geomorphology, Hydrology & Hydraulics geology, river discharge, river sediment discharge, stream gaging California, Subregion I, Subregion II, Klamath River Cell, Eureka Cell, Mattole River Cell, Russian River Cell Geomorphic Provinces Map of California AUTHOR(S): Jenkins, Olaf, P. Published in California Geology, California Division of Mines & SOURCE: Geology, Sacramento, CA, Volume 33, No. 2, 40-42 pages (388132) DATE: 02/01/80 ABSTRACT: The geomorphic provinces of California map has gone through numerous reprintings and has appeared in many different publications for the past half century. It has appeared on the cover of California Geology (Sept 1979). This report is a historical account of its development. KEYWORDS: Geomorphology beaches, deltas, dunes, geology, geomorphic processes, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V Measurements of the California Current in March 1958 AUTHOR(S): Jennings, Feenan D.; Schwartzlose, Richard A. SOURCE: Deep-sea Research, 1960, volume 7, pages 42-47, Pergamon Press, London, Great Britain DATE: 02/25/60 ABSTRACT: This reports on measurements of the California current for which two

sets of drougues were placed approximately normal to the usual flow and followed for one and three days respectively. The first set, which extended thirty miles offshore, drifted southeastward. The second set, which extended from thirty to seventy miles offshore, also moved southeastward but with considerable variation in speed and direction along the line. In the latter set, two rapidly moving streams appeared with a body of slower water between. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents California, Subregion IV, Subregion V, Report on Proposed Hydraulic Model Study of Bolinas Harbor Entrance AUTHOR(S): John A. Blume and Associates SOURCE: Bolinas Harbor District, Prepared for Board of Commissioners, Bolinas, California, 1964 DATE: 01/01/64 ABSTRACT: The purpose of this report was to present: (1) basic oceanographic data applicable to the immediate area of the site of Bolinas Harbor entrance; (2) information concerning two schemes for the development of the entrance into the inner basin; (3) outline a series of recommended hvdraulic model investigations to compare the relative degree of sheltering provided by the two schemes during periods of severe storm wave activity and to ascertain how these coastal structures will effect and be effected by the littoral process. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Oceanography & Meteorology coastal structures, littoral sediment, longshore transport, shore protection, storm waves, wave transformation California, Subregion III, Bolinas Bay Cell The California Coastline - Its Problems and Prospects AUTHOR(S): Johnck, Ellen; Keino, Robert J.; Wallden, Teresa SOURCE: California Bureau of Outdoor Recreation, Pacific Southwest Region, Sacramento, CA, Brochure DATE: 06/08/70 ABSTRACT: A pamphlet on the California coastline, including its problems, its environment, highways, industrial interests, national concerns, and regulatory power; pictures included. KEYWORDS: Coastal Processes, Socioeconomics beaches, coastal structures, institutions/planning/mgmt., population, property value/land use, urbanization California, Subregion I, Subregion II, Subregion IV

Land Use Within the California Coastal Zone AUTHOR(S): Johnson, Huey D.; Brown, Edmund G., Jr.; Robie, Ronald B. SOURCE: California Resources Agency, California Department of Water Resources, Sacramento, CA, Bulletin 207, 181 pages DATE: 10/01/78 ABSTRACT: Report that includes 161 land maps which cover the Coastal Zone from Oregon to Mexico identifying agricultural, native urban, and recreational classes of land. KEYWORDS: Socioeconomics beaches, maps, property value/land use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Refraction Study at Monterey Harbor AUTHOR(S): Johnson, Joe W. SOURCE: University of California, Berkeley, College of Engineering, Fluid Mechanics Laboratory, 12 leaves, illustrations, tables, folding plates (HE-116-71) DATE: 03/26/45 In order to check the accuracy of data obtained from ABSTRACT: refraction diagrams, an investigation was made in Monterey Harbor on Feb. 23, 24, 25. 1945 consisting of measurement of actual wave heights in deep water and at various localities, including Point Pinos, Point Cypress, and in the harbor. The ratios height were calculated and compared with height ratios as obtained from the refraction diagram. KEYWORDS: Coastal Processes, Oceanography & Meteorology aerial photography, wave climate, wave transformation California, Subregion IV, Subregion V, Variability of Wave Period at Point Cypress, February 24 and 28 1945 AUTHOR(S): Johnson, Joe W. University of California, Berkeley, College of Engineering, SOURCE: Fluid Mechanics Laboratory, 5 leafs, illustrations, (HE-116-72) DATE: 03/28/45 ABSTRACT: Wave period was observed in the north cove at Pt. Cypress during the refraction study at Monterey Bay on Feb. 23-25, 1945. The time was observed at which each wave broke over the edge of an abrupt rock ledge. Elapsed time between waves, times in which the waves were at relatively low heights, and a summary of the frequency with waves of various periods that occured are included in four tables. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation

California, Subregion IV, Carmel River Cell

Relationship Between Wind and Waves, Abbots Lagoon, California AUTHOR(S): Johnson, Joe W. SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 6 pages, illustrations, photos, Report No. HE-116-306 DATE: 06/24/49 ABSTRACT: A series of observations on wind generated waves were made in Abbots Lagoon, California, to better define the relation- ships between wind and wave characteristics on relatively small bodies of water of limited fetch. The experimental methods are described and a relationship between wave height and period as a function of fetch and wind speed is presented. Other information that is presented includes a relationship between wave steepness and wave age, wind gradients, and a typical frequency distribution of wave heights. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation, wind California, Subregion II, Point Reyes Cell Beach and Surf Atlas AUTHOR(S): Johnson, Joe W.; Bascom, Willard N. SOURCE: University of California, Berkeley, Department of Engineering, for U.S. Navy on Contract N/Obs 2490 NR-083-008 NE121407, Report No. HE-116-174 DATE: 01/01/50 ABSTRACT: This publication is divided into two sections: A general section that describes coastal processes and a site specific section that discusses the beaches of the Pacific coast. Includes a discussion of wave characteristics, wave transformat- ion in shallow water, wave forecasting, general features of the surf zone, beach profiles a classification of beaches and a glossary of coastal terms. Presents wave refraction diagrams, beach profiles, grain size distributions and photographs of selected sections of the Pacific coast from the Strait of Juan De Fuca, Washington to Point Conception, California. KEYWORDS: Coastal Processes beaches, beach profiles, grain size, wave climate, wave transformation California, Oregon, Subregion I, Subregion II, Subregion III, Subregion IV Wave Records on the Pacific Coast of the United States. AUTHOR(S): Johnson, Joe W.

SOURCE: University of California, Berkeley, Institute of Engineering Research,

2 volumes, illustrations, (IER series 14, Issue No 4) DATE: 09/07/50 ABSTRACT: Brings up to date the status of various wave recorder installations and summarizes known periods for which past wave data are available. This data is from the program instituted by the University of California, Department of Engineering in cooperation with the U.S. Navy. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion I, Subregion II, Subregion IV, Subregion V Summary of Wave Data for Cape Mendocino, California AUTHOR(S): Johnson, Joe W. SOURCE: University of California, Berkeley, Institute of Engineering Research, leaf, illustration, IER series 3, Issue 356 (AD-024-631) DATE: 11/01/53 ABSTRACT: This is a summary of wave data for Cape Mendocino, California compiled from visual observations and from hindcasting procedure. KEYWORDS: Coastal Processes, Oceanography & Meteorology storm waves, wave climate, wave transformation, wind California, Subregion I, S. Eureka Reach Basic Oceanographic Data for the California Coast at the Mouth of the Russian River AUTHOR(S): Johnson, Joe W. SOURCE: Report to Teckote Corporation, Alabama, 13 pages typed manuscript, photos, maps, diagrams DATE: 03/01/59 ABSTRACT: Survey of data including waves, wind, tides, nearshore sediment and other miscellaneous data for the Russian River. KEYWORDS: Coastal Processes, Oceanography & Meteorology littoral sediment, nearshore currents, tides, wave climate, wave transformation, wind California, Subregion II, Russian River Cell Beach Stability, Santa Cruz, Calif. Report to Santa Cruz Seaside Company AUTHOR(S): Johnson, Joe W. Unpaged manuscript, diagrams, available at the University of SOURCE: California, Berkeley, Water Resources Archives DATE: 05/01/59 Report on the stability of Santa Cruz Beach as it affects the ABSTRACT: construction of the outer wall of the proposed garage at the Santa Cruz Seaside Co. The designated section of beach was found to be stable with no erosion problem. Recommendations for construction are made. KEYWORDS: Coastal Processes beaches, coastal structures, shoreline changes California, Subregion IV, Santa Cruz Cell

The Early Pacific Coast Photographs of Carleton E. Watkins AUTHOR(S): Johnson, Joe W. SOURCE: University of California, Berkeley, Water Resources Center Archives, Archives series report No. 8, 64 pages, Appendices A-X list library's & photos title DATE: 02/01/60 ABSTRACT: Includes historical photographs, such as those of the pioneer Pacific Coast photographer, Carleton E. Watkins. To provide data on the character and extent of the more important and readily available permanent collections of Watkins' photographs, this report was prepared by the Water Resources Center. KEYWORDS: Survey aerial photography California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Bolinas Lagoon Entrance AUTHOR(S): Johnson, Joe W. Report to Board of Commissioners, Bolinas Harbor District, SOURCE: Bolinas, Calif, December, 1963 DATE: 12/10/63 ABSTRACT: A report on the problem of developing the Bolinas Lagoon entrances report includes discussion of design wave, wave refraction and diffraction effects, degree of protection, sedi- ment problem and advisability of hydraulic model studies. Basic data available for this study included: (1) wave refraction diagrams by USACE. (2) wave statistics from National Marine Consultants, 1960. (i) wave statistics for seven deepwater stations along the Calif Coast. (ii) wave statistics for 10 most severe storms, No Col, 1951-1960. (3) unpublished studies of nearshore sediment movement by KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal structures, longshore transport, sedimentation, storm waves, tidal inlets, wave transformation California, Subregion III, Drakes Bay Cell, S. Drakes Bay Reach, Bolinas Bay Cell Sand Losses From a Coast By Wind Action AUTHOR(S): Johnson, Joe W.; Kadib, A. A. SOURCE: University of California, Berkeley, College of Engineering; Proceedings of 9th Conference on Coastal engineering, Lisbon, Portugal, ASCE, New York, NY, Chapter 24, pages 368-377 DATE: 06/01/64

ABSTRACT: A procedure is outlined for the calculation of the annual rate of transport of sand that might be expected to be carried inland from a natural beach by wind action. The procedure involves the beach composition and alinement, the frequency of winds of various speeds from various directions, and a suitable formula to describe the transport. It is possible that the transport formula may be altered as a result of current research; however, the general procedure as outlined should apply. KEYWORDS: Coastal Processes wind, wind transport California Gravel Mining Operation; Mouth of Russian River, Jenner by the Sea AUTHOR(S): Johnson, Joe W. SOURCE: Utah Construction and Mining Company, San Francisco, CA, 13 pages typed manuscript, maps, archived at the University of California, Berkeley, Water Resources Archives DATE: 10/25/64 ABSTRACT: Study of some sources of information on the effect of sand and gravel removed from the Russian River near Jenner and the sta- bility of beaches in that area. Conclusions for the continued removal are drawn. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics beach profiles, coastal erosion, littoral sediment, longshore transport, mining, river sediment discharge California, Subregion II, Russian River Cell Study of High Water Levels in Drake's Bay, California AUTHOR(S): Johnson, Joe W. Illustrations, not published, 21 leaves, available at the SOURCE: University of California, Berkeley, Water Resources Archives DATE: 04/27/65 ABSTRACT: The purpose of this study was to predict the possible maximum hiqh water levels in Drake's Bay, California. A discussion of factors in fixing a possible maximum high water is presented. The factors are (1) astronomical tides, (2) meteorological effects, (3) wave action, (4) tsunamis, and (5) shoreline pro- cesses. KEYWORDS: Coastal Processes, Oceanography & Meteorology storm surge, tides, tsunamis, wave climate, wind California, Subregion III, Drakes Bay Cell Nearshore Sediment Movement - Central California Coast AUTHOR(S): Johnson, Joe W. SOURCE: Proceedings, Coastal Engineering Specialty Conference, Santa Barbara,

CA, October 11-13, 1965, American Society of Civil Engineers, New York, NY DATE: 10/01/65 ABSTRACT: An 80-mile reach of the central California coast, extending from the mouth of the Russian River in the north to Half Moon Bay in the south, was studied for characteristics of sediment move- ment in the nearshore zone. From the results of a large number of beach and offshore sediment samples and other information, several techniques were utilized in appraising the nature of sediment movement along the reach of the coastline under study. Aspects studied included the physical nature of the coastline from a consideration of the prevailing wave energy, the distribution of light and heavy minerals and their sources, the use of certain naturally radioactive minerals, use as a KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment, longshore transport, petrology, sedimentation California, Subregion II, Subregion III Estimating the Importance of Nearshore Sediment Movement in Engineering Problems AUTHOR(S): Johnson, Joe W. SOURCE: Central Water and Power Research Station, Poona, India. Golden Jubilee Symposia, 1966. (Proceedings), pages 43-50, maps, diagrams DATE: 01/01/66 ABSTRACT: In many coastal enginering problems, a knowledge of the nature and character of nearshore sediment movement is of utmost impor- tance to the success of the project. Experience with nearby sediment deposition and transportation at nearby similar types of engineering works is perhaps the most reliable sources of information on expected conditions at the proposed structure. Such information, however, often is not available, in which case recourse must be made to other methods. Such methods consist of study of the shoreline; use of artificial and natural tracers; heavy mineral analyses, etc. This paper discusses these methods KEYWORDS: Coastal Processes littoral sediment, longshore current, longshore transport, offshore/onshore transport California Wave Action in the Point Sur Area AUTHOR(S): Johnson, Joe W. SOURCE: Illustrations, not published, 4 leaves, available at the University of California, Berkeley, Water Resources Archives DATE: 01/28/66

ABSTRACT: The purpose of the report was to summarize the character of wave action in the Pt. Sur area of California in connection with the design, operation, and maintenance of an offshore loading plant at three possible sites: Little Sur River, Pt. Sur and Big Sur River. KEYWORDS: Coastal Processes hydrographic surveys, wave climate, wave transformation California, Subregion V, Point Sur Cell Russian River Sand & Gravel Project: Report on Hydrographic Surveys Studies and Analyses at the Mouth of the Russian River AUTHOR(S): Johnson, Joe W. SOURCE: Utah Construction and Mining Company, San Francisco, CA, maps, aerial photographs, tables, archived at University of California, Berkeley, Water Resources Archives DATE: 05/16/67 ABSTRACT: Analysis of the hydrographic data developed at the mouth of the Russian River that would influence the opening of a navigational channel between river and ocean. All data developed is enclosed. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Survey hydrographic surveys, littoral sediment, mining, river sediment discharge California, Subregion II, Russian River Cell Shoreline of South Monterey Bay 1961-1968 AUTHOR(S): Johnson, Joe W. SOURCE: unpublished, Archived at University of California, Berkeley, Water Resources Archives DATE: 06/28/68 ABSTRACT: This volume has 3 sections. Included are: an appraisal of the shoreline conditions in Monterey Bay and the effects of sand removal offshore of the high tide line; Monterey sand case correspondence; and mean neap tide calculations for Monterey and California. KEYWORDS: Coastal Processes, Socioeconomics coastal erosion, mining, offshore/onshore transport, shoreline use, tides, wave climate California, Subregion IV, S. Monterey Bay Cell Tide Gage; Tidal Relationships, Tidal Prism Data, Bolinas Bay and Bolinas Lagoon AUTHOR(S): Johnson, Joe W. SOURCE: 1 volume, unpaged, maps, tables, some handwritten pages, archived at University of California, Berkeley, Water Resources Archives DATE: 01/01/69 This report considers tidal relationship, and tidal prism ABSTRACT: data and

USGS gage charts for Bolinas Lagoon, May 1968. Also included is Johnson's correspondence with various individuals in order to obtain the data. KEYWORDS: Coastal Processes maps, tidal inlets, tides California, Subregion III, Bolinas Bay Cell Historical Photographs and the Coastal Engineer AUTHOR(S): Johnson, Joe W. SOURCE: Shore and Beach, Journal of the American Shore and Beach Preservation Association, O'Brien Hall, University of California, Berkeley, CA, Volume 29, April 1969, number 1, pages 18-24 DATE: 04/01/69 ABSTRACT: This report discuss historical photographs and what they can do to help a coastal engineer. A discussion of pioneer photo- grapher, Carleton E. Watkins, photographs of the Mendocino County coast and their application to cliff recession is discussed and 6 pictures, 3 taken in 1860 and 3 taken in 1960, demonstrate a century of coastal changes. KEYWORDS: Coastal Processes coastal erosion, shoreline changes California, Subregion I, Subregion II, Subregion IV Bolinas Bay Wave Gage Data, 2/20/69 to 8/23/69 AUTHOR(S): Johnson, Joe W. SOURCE: 1 volume (various pagings), tables, graphs, Not published, archived at University of California, Berkeley, Water Resources Archives DATE: 08/23/69 ABSTRACT: This is a volume of Bolinas Bay wave gage data. It contains basic and reduced data from 2/20/69 to 8/23/69, inclusive. Included are descriptions of recorder rolls, graphs of significant heights and dominant periods, graphs of average periods, tabulations of periods and tabulations of height. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion III, Bolinas Bay Cell Print-outs of "L.E.O." Wave Data for Stinson State Park Beach (May 1,1968-June 30,1969) and Bolinas, California (May 1,1968- Feb 23, 1969 AUTHOR(S): Johnson, Joe W. SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, unpaged, maps, folding tables DATE: 08/26/69 ABSTRACT: These are print-outs of littoral environment observaions for Bolinas and Stinson State Beach. Wave climate, wind speed and direction, littoral

current, tide level, rip flows, water temperatures and littoral current were measured. KEYWORDS: Coastal Processes longshore current, nearshore currents, tides, wave climate, wind California, Subregion III, Bolinas Bay Cell Stabilization of the Bolinas Lagoon Inlet AUTHOR(S): Johnson, Joe W. SOURCE: 1 vol, maps, plates, (done for Mr. Norman Gilroy, Bolinas Harbor Dist.), 40 pgs, 2 appendixes, not published, available at the University of California, Berkeley, Water Resources Archives DATE: 09/01/69 ABSTRACT: This report was concerned with investigating structures to stabilize the entrance to Bolinas Lagoon with a minimum of maintenance and problems for both the channel and adjacent shoreline. There is an analysis of all available oceanographic data such as tides, wave action, currents, sediment movement, and both short and long term shoreline changes. Appendix A is on Bolinas wave gage data and Appendix B is on tide data at Bolinas Bay and Bolinas Lagoon. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal structures, longshore transport, nearshore currents, shoreline changes, tidal inlets, California, Subregion III, Bolinas Bay Cell Seasonal Beach Changes AUTHOR(S): Johnson, Joe W. Unpublished, 1 volume, various paging, typed and handwritten SOURCE: manuscript, tables, maps, diagrams, archived at University of California, Berkeley, Water Resources Archives DATE: 07/01/70 ABSTRACT: The article discusses variables that determine the character of beaches and effect a particular beach profile. Seasonal changes of northern California beaches are reviewed with speci- fic reference to Russian River and Wright's Beach and Stinson Beach. Appendix A contains standard information on shoreline processes and Appendix B comprises original computations, and photos. KEYWORDS: Coastal Processes beaches, beach profiles, shoreline changes California, Subregion II, Subregion III, Russian River Cell, Bolinas Bay Cell The Significance of Seasonal Beach Changes in Tidal Boundaries AUTHOR(S): Johnson, Joe W.

SOURCE: 1 volume, various pagings, exhibits, archived at University of California, Berkeley, Water Resources Archives

DATE: 12/01/70 ABSTRACT: Appendix A is the original draft. Appendix B is the State Lands Commission data on seasonal variations of mean high water shorelines at Stinson Spit. It discusses shoreline processes and seasonal beach changes. KEYWORDS: Coastal Processes, Geomorphology beaches, beach profiles, shoreline changes, tides California, Subregion I, Subregion II, Subregion IV, Bolinas Bay Cell Bottom Sediment Characteristics near Entrance to San Francisco Bay AUTHOR(S): Johnson, Joe W. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Report No. HEL-24-3, 29 pages (AD-722 686) DATE: 04/01/71 ABSTRACT: The bed material in the Golden Gate, its apporoaches, and adjacent beaches show a relatively small range in grain size -- fine sand (125-250 microns) to coarse sand (500-1000 microns). There appears to be no relatively coarse material of the gravel sizes available on the bottom which could serve as an amoring surface and thus control the frictional resistance to flow in and out of the Golden Gate. Generally, coarse material is found in those locations where the current velocities are high. From the limited data available, however, it appears that flow resistance in the Golden Gate and vicinity is probably controlled more by form resistance of ripples and sand waves KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology grain size, littoral sediment, nearshore currents, tidal inlets California, Subregion III, Bolinas Bay Cell, San Francisco Cell Summary of Annual Wave Power for Ten Deep Water Stations Along the California, Oregon and Washington Coast AUTHOR(S): Johnson, Joe W.; Moore, J. T.; Orrett, F. B. University of California, Berkeley, College of Engineering, SOURCE: Hydraulic Engineering Laboratory Report HEL-24-9, Oct. 71, 241 pages DATE: 10/01/71 ABSTRACT: Wave statistics are presented for ten locations on the Califor- nia, Oregon, and Washington Coasts. These deepwater wave stat- istics were compiled by hindcast procedures using meterological records and charts from 1956 through 1958. Wave Height, Direct- ion, and Wave Period for Sea and Swell were averaged monthly and annually. Seasonal variations of wave power were analyzed on а monthly basis, and are graphically presented as wave power vs. direction. KEYWORDS: Coastal Processes, Oceanography & Meteorology

climatology, wave climate, wind California, Oregon, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Tidal Inlets on the California, Oregon, and Washington Coasts AUTHOR(S): Johnson, Joe W. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, (HEL-24-12) 156 pages DATE: 02/01/72 ABSTRACT: A critical examination of tidal prism and inlet data from various tidal inlets on the coasts of California, Oregon and Washington. Assessment of reliability of measured quantities and speculation on reasons for scatter of data. Relationships between inlet area and tidal prism for tidal inlets are then reevaluated. KEYWORDS: Coastal Processes coastal structures, nearshore currents, tidal inlets, tides California, Subregion I, Subregion II, Subregion IV, Deep Water Wave Power Reaching Various Locations on the Pacific Coast as Derived from Hindcast Wave Statistics AUTHOR(S): Johnson, Joe W. SOURCE: Unpublished, 1 volume, unpaged, tables and graphs, archived at University of California, Berkeley, Water Resources Archives DATE: 02/01/73 ABSTRACT: Handwritten tabulations of wave power for the following locations: Wrights Beach, mouth of the Russian River, Drakes Bay, Bolinas Lagoon and Stinson Beach. Also included are values for sea and swell wave power for west coast inlets. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, wave climate, wave transformation, wind California, Subregion II, Subregion III, Russian River Cell, Drakes Bay Cell, Bolinas Bay Cell Tabulations of Wave Power for Stinson Beach, Bolinas Wave Gage, Wright's Beach and Prairie Creek Beach AUTHOR(S): Johnson, Joe W. Unpublished, 1 volume, various pagings, tables and graphs, SOURCE: archived at University of California, Berkeley, Water Resources Archives DATE: 02/01/73 ABSTRACT: Handwritten tabulations of wave power for above sites using LEO data. From observations at different times for differing periods between 1968 and 1970. KEYWORDS: Coastal Processes wave climate, wave transformation

California, Subregion I, Subregion II, Subregion III, Klamath River Cell, Russian River Cell, Bolinas Bay Cell Bolinas Lagoon Inlet, California AUTHOR(S): Johnson, Joe W. SOURCE: University, California at Berkeley, Hydraulic Engineering Laboratory, 44 leaves, illustrations, maps, HEL-24-15 DATE: 02/01/73 ABSTRACT: An appraisal of the sedimentation processes at Bolinas Lagoon. Includes information on a number of factors such as repeat bottom and beach face surveys at frequent time intervals, aerial photographs, wave data, littoral currents, tide and tidal current data, and the physical properties of bottom and beach sediments. KEYWORDS: Coastal Processes, Geomorphology, Survey aerial photography, beach profiles, grain size, longshore current, tidal inlets, wave climate California, Subregion III, S. Drakes Bay Reach, Bolinas Bay Cell Bolinas Lagoon Inlet, California AUTHOR(S): Johnson, Joe W. SOURCE: University of California, Berkeley, Hydraulic Engineering Lab., 46 pages, Water Resources Abstracts (083995 W75-06217), Minneapolis, MN: Environmental Hydrology Corporation DATE: 05/01/74 ABSTRACT: The Bolinas Bay-Bolinas Lagoon system is a natural laboratory in which a large amount of data has been compiled on hydrography, wave action, tidal hydraulics, sediment transport and sedimentation, and the ecocystem. However, the data are insufficient to adequately define the importance of the inlets area and tidal prism. The source nature, and availability of data on the Bolinas Lagoon Inlet were summarized as a guide to possible Future Studies at Bolinas, and at the other inlets. A reanalysis of data from inlets on the U.S. Coast by O'Brien (1967) resulted in a later observation (O'Brien, 1971); he beleived that the equilibrium relationship between inlet area KEYWORDS: Coastal Processes littoral sediment, nearshore currents, sedimentation, tidal inlets, tides, wave climate California, Subregion III, Bolinas Bay Cell Littoral Processes at Some California Shoreline Harbors

AUTHOR(S): Johnson, Joe W.

SOURCE: Typed manuscript (prepared for publication in Shore and Beach, Oct. 1975) 12 leaves, photos, available at the University of California, Berkeley, Water Resources Archives DATE: 10/01/75 ABSTRACT: The extensive use of the nearshore area of the California coast for shipping, fishing, recreation, and oil production has resulted in the development of many methods for effective and economical solution of the engineering problems related to these operations. Some of these methods resulted from specific research projects designed to study the fundamentals of the phenomena. Various developments evolved from years of experi- ence in the design, operation, and maintenance of coastal structures, particularly those constructed along the southern California coast. Experience gained from both successes and failures contributed to widely used procedures where the design KEYWORDS: Coastal Processes coastal structures, littoral sediment, longshore transport, shoreline use California, Subregion I, Subregion II, Subregion IV Closure Conditions of Northern California Lagoons AUTHOR(S): Johnson, Joe W. SOURCE: 1 folder, illustrations, tables, folding plates, available at University of California, Berkeley, Water Resources Archives DATE: 05/01/76 ABSTRACT: Includes a report on closure condition of Northern California Lagoons and handwritten notes of wave power data on various locations such as Bodega, Russian River, Big Lagoon, Drakes Estero, Bolinas. KEYWORDS: Coastal Processes nearshore currents, tidal inlets, tides, wave climate, wave transformation California, Subregion I, Subregion II, Subregion III Closure Conditions of Northern California Lagoons AUTHOR(S): Johnson, Joe W. Shore & Beach, Volume 44, No. 2, July 1976, Journal of the SOURCE: American Shore and Beach Preservation Association, O'Brien Hall, University of California, Berkeley, CA, page 20-23, maps, tables DATE: 07/01/76 This is a discussion of closure conditions of Northern ABSTRACT: Californ- ia lagoons, six lagoons in the Point Reyes area, and 4 addi- tional lagoons in the extreme north. Characteristics of the lagoons, wave power, tidal prism, and wave roses are discussed in connection with the closure conditions. KEYWORDS: Coastal Processes nearshore currents, tidal inlets, tides, wave climate, wave transformation

California, Subregion I, Subregion II, Subregion III, Smith River Cell, Klamath River Cell, Point Reyes Cell Wave Power Off Ocean Beach, San Francisco AUTHOR(S): Johnson, Joe W. SOURCE: 26 leaves, graphs (some folding), tables 30 cm, archived at University of California, Berkeley, Water Resources Archives DATE: 05/01/77 ABSTRACT: This is a folder of graphs and handwritten tables of wave power off Ocean Beach, San Francisco (lat. 38N, long. 124W) for periods October 1975 to April 30, 1976 incl. and October 1976 to April 30, 1977 incl. There is an explanation of wave power calculations, and the wave data was from Fleet Numerical Weather Center forecasts on file at the USACE San Francisco District. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, Subregion III, San Francisco Cell Shoreline Characteristics, Ocean Beach-San Francisco Prepared for Bureau of Sanitary Engineering, Dept. of Public Works, City & County of S.F. AUTHOR(S): Johnson, Joe W. SOURCE: Unpublished; 1 vol. (unpaged); photos, graphs, tables, maps, available at the University of California, Berkeley, Water Resources Archives DATE: 05/10/77 Report on the erosion problem at Ocean Beach, San Francisco. ABSTRACT: The author reviews seasonal beach changes, shoreline changes, beach alignment and littoral draft and drains conclusions on the erosion problem. The report is supported by copies of a number of a published articles by the author and others and extensive newspaper clippings. KEYWORDS: Coastal Processes, Geomorphology beach profiles, coastal erosion, coastal erosion problems, dunes, longshore transport, California, Subregion III, San Francisco Cell Littoral Processes at Ocean Beach, San Francisco, California AUTHOR(S): Johnson, Joe W. SOURCE: Unpublished 1 vol. (various pagings) photos, maps, diagrams, archived at the University of California, Berkeley, Water Resources Archives DATE: 11/28/78 ABSTRACT: A report discussing the variables in differentiation of the character of Ocean Beach including the waves, beach material and headlands containing the beach. The report is accompanied by copies of several published

articles by the author and others, newspaper clippings and draft report entitled "Compiltation of facts relating to a coastal study of Ocean Beach" prepared by April Gahern for the San Francisco Waste Water Management Agency with assistance from the California Coastal Commission. KEYWORDS: Coastal Processes coastal erosion problems, littoral sediment, longshore transport, shore protection, wave transformation California, Subregion III, San Francisco Cell The Effect of a Yacht Harbor on Coastal Processes in the Santa Cruz Area, California AUTHOR(S): Johnson, R. E. University of California, Santa Cruz, CA, Division of Natural SOURCE: Sciences, Ninth Congress of the International Union for Quatern- ary search; Abstracts, 174 pages, GEOREF(110466082-247871) DATE: 12/02/73 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes coastal erosion, coastal structures, sand entrapment, sedimentation, shoreline changes, shoreline use California, Subregion IV, Santa Cruz Cell Ecological Survey of Tomales Bay - Preliminary Report of the 1960 Hydrographic Survey AUTHOR(S): Johnson, R. G.; Bryant, W. R.; Hedgepeth, J. W. SOURCE: University of the Pacific, Pacific Marine Station, Dillion Beach, CA, Research Report, No. 1, 13 pages, figures DATE: 03/01/61 ABSTRACT: Part of a larger program of studies to investigate basic problems in marine ecology and geology in Tomales Bay. Hydrographic data reported in this survey include: temperature, salinity, oxygen, transparency, currents. Also includes a physical description of Tomales Bay. KEYWORDS: Geomorphology, Oceanography & Meteorology geology, hydrographic surveys, nearshore currents, tidal inlets, tides California, Subregion II, Bodega Bay Cell, S. Bodega Bay Reach, Point Reyes Cell Geology Coastal and Geological Hazards AUTHOR(S): Johnston, Elene; Adent, William; Calif. State and Regional Comm. Staff (compilers) SOURCE: Draft Rpt (unpublished) prepared for various California coast Regional Comm., 95 pgs, illustrations, tables, available at the University of California, Berkeley, Water Resources Archives

DATE: 02/01/74 ABSTRACT: Objective was the review of 4 major geologic hazards: earthquakes, landslides, tsunamis, and shoreline erosion, found in California Coastal Zone & recommend planning policies for coastal zone development in light of these hazards. Does not identify precise location of hazardous areas. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics coastal erosion, coastal erosion problems, geology, institutions/planning/mgmt., shoreline changes, tsunamis California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Ecological Characterization of the Central and Northern California Coastal Region. Volume IV, Watersheds and Basins, Chapters 1-16 AUTHOR(S): Jones and Stokes Associates, Inc SOURCE: U.S. Fish & Wildlife Service, Washington, D.C., Office of Biological Services; Bureau of Land management, Los Angeles, CA, Report No. FWS/0B5-80/48.1, 700 pages DATE: 10/01/81 ABSTRACT: For central and northern coastal California, land areas are subdivided into 22 watershed units and ocean areas into 5 basins determined by offshore geology. Information on the watershed includes terrestrial, freshwater, and estuarine physical-chem- ical processes and features, biological resources, and socio- economic activities. Included are descriptions of geology, soils, climate, tsunami hazard, hydrology and water quality. The biological resources section contains information on selected species and areas of ecological concern. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics climatology, environmental constraints, geology, nearshore currents, tsunamis, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Coastal Erosion At Selected Points On Southern Monterey Bay AUTHOR(S): Jones, Gary D. SOURCE: University of California, Santa Cruz, CA, Earth Sciences Dept., Senior Thesis, 62 Pages DATE: 07/01/83 ABSTRACT: Not Reviewed. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, dunes, longshore transport, shoreline changes, wave climate California, Subregion IV, S. Monterey Bay Cell

Report on Jenner Jetty at Mouth of Russian River

AUTHOR(S): Jones, Robert L.; Jones, Gerald H.; Schultz, Walter G.; Horton, Van G. SOURCE: California Department of Public Works, Divisions of Water Resources, Sacramento, CA, 35 pages DATE: 04/01/42 ABSTRACT: This report presents forth a complete history of the formulation of plans, financing, construction, and improvement of the jetty from 1929 to date, including a description of the physical features of each stage of development and construction. An appendix presented at the end of each report shows photographs. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, institutions/planning/mgmt., shoreline changes California, Subregion II, Russian River Cell California Streamflow Characteristics (from records through 1968) AUTHOR(S): Jorgensen, L. N.; Rose, M. A.; Busch, R. D.; Bader, J. S. California Department of Water Resources, Sacramento, CA, two SOURCE: vol, Colorado River Basin, Southern Great Basin, Pacific Slope Basins excluding Central Valley, 657 pgs & 1421 pgs (1004-05) DATE: 06/07/71 ABSTRACT: Report presenting statistical summaries of California streamflow records. Data consists of station descriptions, duration tables of daily discharge, highest mean discharge each year, lowest mean discharge, and statistics for monthly and annual mean dis- charge. Bay charts and tables included. KEYWORDS: Hydrology & Hydraulics river discharge, river sediment discharge California Heavy Minerals in Beach and Stream Sediments as Indicators of Shore Processes Between Monterey and Los Angeles, California AUTHOR(S): Judge, Charles W. SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, Technical Memorandum Number 33, 52 pages DATE: 11/01/70 ABSTRACT: A study of heavy minerals on the California coast was made at CERC as an adjunct to the Radioisotopic Sand Tracer (RIST) and the Littoral Environmental Observation (LEO) programs. Beach samples taken during various times of the year were supple- mented by samples from offshore and the rivers. Heavy minerals in the 63-125 micron fraction of the samples were identified by optical techniques. Five provinces were identified: 1) a northern Hornblende

province from north of Monterey Bay to Piedras Blancas Point; 2) a northern Augite Province from Piedras Blancas Point to Avila Beach; 3) an Epidote province from Avila Beach to Ventura; 4) a southern Augite province KEYWORDS: Coastal Processes beaches, grain size, littoral sediment, longshore transport, petrology, river sediment discharge California, Subregion IV, Subregion V, Subregion VI, Subregion VII Littoral Studies Near San Francisco Using Tracer Techniques AUTHOR(S): Kadib, A. SOURCE: USACE, Beach Erosion Board, (now USACE, Coastal Engineering Research Center, Vicksberg, MS), Tech. Memo 131, 1964 DATE: 01/01/64 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Survey littoral sediment, longshore transport, remote sensing California, Subregion III Transportation of Coastal Sediments AUTHOR(S): Kamel, Adel M. University of California, Berkeley, Hydraulic Engineering SOURCE: Laboratory, Wave Research Projects, Technical Report Series 185, Issue 1, 111 leaves, illustrations DATE: 01/01/62 ABSTRACT: A method of assaying naturally radioactive thorium as a mean of detecting the direction of littoral drift and sand along a sea coast was investigated and applied to the portion of the Coast of California from the Russian River mouth to Point San Pedro. The method proved to be very quick for qualitative re- sults and rather simple compared to mineralogical analyses. The method involved the collection of surface and deep samples along the reach of the coast under study. The heavy minerals for a limited size fraction of the sand samples were separated by bromoform and the radioactivity present in them was counted by the use of a two channel gamma-ray spectrometer. KEYWORDS: Coastal Processes, Geomorphology grain size, littoral sediment, longshore transport California, Subregion II, Subregion III, Russian River Cell, Bodega Bay Cell, Point Reyes Cell, Drakes Bay Cell, San Francisco Cell Tracing Coastal Sediment Movement by Naturally Radioactive Minerals AUTHOR(S): Kamel, Adel M.; Johnson, Joe W. SOURCE: University of California, Berkeley, College of Engineering, proceedings of 8th conference on Coastal Engineering, Mexico Cty ASCE, Part 2, chap 19, pages 324-330, Water Resources Abstracts DATE: 11/01/62

ABSTRACT: Thorium was used as a natural tracer to determine the direction of littoral drift along the California Coast. Radioactive thorium was added naturally at locations along the coast where rivers flowing through thorium rich granite outcrops reach the coast or where the thorium rice granite itself outcrops at the sea coast. The choice of the of the concentrations of thorite and heavy minerals are believed to be two good parameters for the study of the effect of progressive sorting and consequently the determination of the direction of littoral drift along the coast. KEYWORDS: Coastal Processes, Geomorphology geology, littoral sediment, longshore transport, petrology, river discharge, sedimentation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Surface-Water Hydrology of California Coastal Basins between San Francisco Bay and the Eel River AUTHOR(S): Kante, S. E.; Thompson, T. H. SOURCE: U.S. Geological Survey, Water - Supply Paper 1851, California Department of Water Resources, U.S. Government Printing Office, Washington, D.C., 60 pages DATE: 01/01/67 ABSTRACT: An analysis of the surface water hydrology of the coastal basins of California that lie between the north shore of San Francisco Bay and southern boundary of Eel River. Maps, tables and graphs included. KEYWORDS: Hydrology & Hydraulics maps, precipitation, river discharge, watersheds California, Subregion II, Subregion III Review of Coastal Changes at Bodega Harbor Inlet AUTHOR(S): Karp, Lawrence B. SOURCE: University of California, Berkeley, CE 299 student paper to Prof. Johnson, 1975 Berkeley, 51 leaves, folding maps, photos DATE: 04/01/75 ABSTRACT: The inlet and improvements at Bodeqa Harbor on the Sonoma County coast were studied with the aid of aerial photographs, maps, and historical records. The sediment movement by wave refraction occurring in the vicinity was found to compare closely with the theories of prominent coastal engineers. Shoreline changes were compared during the period of improvement. Equilibrium of Bodega Bay was found to exist, with significant changes made only by man. KEYWORDS: Coastal Processes, Geomorphology

aerial photography, geology, longshore transport, shoreline changes, tidal inlets, wave transformation California, Subregion II, Russian River Cell, Swell Prediction by a Mutiple Point-Source Swell Generation Model AUTHOR(S): Kauffmann, C. F. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, 93940, Government Report Announcements, 73(18): 67-68, Oceanic Abstracts (74-04389) DATE: 09/25/73 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology wave climate, wave transformation, wind California, Subregion I, Subregion II, Subregion IV, Subregion V A Study of the Benthic Algae in the Kelp Bed off Del Monte Beach Monterey, California AUTHOR(S): Keithly, John L. SOURCE: U.S. Naval Post Graduate School, Monterey, CA, Master's Thesis, 145 pages with sketches DATE: 12/01/74 ABSTRACT: A subtidal study of the benthic flora and substrate relief was conducted within the kelp bed off Del Monte Beach, near Monterey Harbor, Monterey, California. The study was carried out by utilizing SCUBA equipment, aerial photography, and ocean wave refraction/numerical computer programs. During the course of the SCUBA investigation, approximately fifty species of benthic algae were collected. The occurrences of most abundant genera were mapped symbolically if they were observed within the boundaries of four pre-selected 12 meter square quadrat sites. A preliminary analysis of the mapped data indicated that the the relation to certain types of substrate. Aerial photographic KEYWORDS: Oceanography & Meteorology aerial photography, environmental constraints, wave transformation California, Subregion IV, S. Monterey Bay Cell Landsliding Channel Changes, Sediment Yield and Land Use in the Van Duzen River Basin, North Coastal California, 1941-1975 AUTHOR(S): Kelsey, Harvey M. SOURCE: University of California, Santa Cruz, CA, PhD Thesis, 370 pages and figures. Earth Resources Monograph Region 5:3 DATE: 06/01/77 ABSTRACT: The coast ranges of Northern California are the most rapidly eroding

region of comparable size in the United States. This area has undergone recent (post-Miocene) uplift and is underlain by highly deformed and faulted sandstone and melange units of the Franciscan assemblage. This study investigates the sources of the large amount of sediment, the mechanisms of sediment transport, and the time during which sediment moves in the upper half of the Van Duzen River basin. Sediment transport in the basin for 1975 is documented by six sets of aerial photographs. KEYWORDS: Geomorphology, Hydrology & Hydraulics geology, geomorphic processes, river-bed sediment, California, Subregion I, Eureka Cell A Sediment Budget and an Analysis of Geomorphic Process in the Van Duzen River Basin, North Coastal California, 1941-1975 AUTHOR(S): Kelsey, Harvey M. Redwood National Park, Crescent City, CA, Geological Society of SOURCE: America Bulletin, Boulder, CO, 91:4, I 190-I 195 and II 1119-II 1216 pages, GEOREF (983668 80-26362) DATE: 01/01/80 ABSTRACT: Not reviewed. KEYWORDS: Geomorphology geomorphic processes, river-bed sediment, river sediment discharge, sedimentation, watershed sediment California, Subregion I, Eureka Cell Major Sediment Sources and Limits to the Effectiveness of Ero- sion Control Techniques in the High Erosion Watersheds of Northern Coastal CA AUTHOR(S): Kelsey, Harvey M.; Madej, Mary. A.; Pitlick, John; Stroud, P. SOURCE: U.S. National Park Service, Redwood National Park, Crescent City, CA, GEOREF (1063794 81-50334) DATE: 01/01/81 Not reviewed. ABSTRACT: KEYWORDS: Geomorphology, Hydrology & Hydraulics geology, river-bed sediment, river sediment discharge, sedimentation, watersheds, watershed sediment California, Subregion I Sediment Souces and Sediment Transport in the Redwood Creek Basin: Progress Report AUTHOR(S): Kelsey, Harvey M.; Madei, Mary A.; Pitlick, John; Coghlan, Michael SOURCE: U.S. National Park Service, Redwood National Park, Crescent City, CA, Research and Development, Technical Report 3, 114 pages DATE: 05/01/81 ABSTRACT: A study of sediment sources and sediment transport within the basin.

KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics estuarine sediment storage, institutions/planning/mgmt., maps, precipitation, river sediment discharge, stream gaging California, Subregion I, Klamath River Cell, S. Klamath River Reach, Eureka Cell New Ocean Eddies Found off California AUTHOR(S): Kerr, Richard A. SOURCE: Science, Washington, D.C.: American Association for the Advancement of Science, Volume 215, No. 4539, 19 March 1982, page 1490 DATE: 03/19/82 ABSTRACT: An article discussing the new ocean eddies found off California addresses what Jane Simpson and Charles Koblinsky of Scripps Institute of Oceanography and Thomas Dickey of USC discovered about these eddies. KEYWORDS: Oceanography & Meteorology coastal currents California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Theoretics in Design of the Proposed Crescent City Harbor Tsunami Model AUTHOR(S): Keulegan, G. H.; Harrison, J.; Mathews, M. J. SOURCE: USACE, Waterways Experiment Station, Vicksburg, MS, 1969, (TR-69-9) DATE: 06/01/69 ABSTRACT: Wave parameters considered for tsunami model studies are wave height and period, and wave-front orientation. The first two of these parameters can be determined by marigraphic measurement or by visual observation; however, wave-front orientation was never accurately observed at the problem site (Crescent City, California). A digital computer program was written to plot wave rays from three recent epicentral locations to Crescent City to obtain approximate tsunami-front orientations. The refraction diagrams were checked by comparing the computed and actual arrival times of the wave fronts. The actual arrival times were obtained from recording tide stations at Crescent KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal erosion, coastal structures, overwash, tsunamis California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell Analysis of Forecast and Observed Wave Values at Station #909, 10 March 1945 - 17March 1945 AUTHOR(S): Killory, M. F. SOURCE: University of California, Berkeley, Department of Engineering, 8 leaves, illustrations, tables, HE-116-114 DATE: 05/17/45

ABSTRACT: This was an analysis of forecasts and observed wave values at station #909, March 10-17, 1945. Weather map analysis, forecast ing procedure, observation from report HE-116-89 were used to get rates. KEYWORDS: Oceanography & Meteorology climatology, maps, wave climate, wave transformation, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V In-Situ Field KData Gathering Stations, San Francisco Bay-Delta, Salinity Intrusion with Navigation Channels AUTHOR(S): Kinnetic Laboratories, Inc. SOURCE: Kinnetic Laboratories, Inc., Santa Cruz, California, Report No. KLI-81-1, 116 pages, Revision of report dated 16 Jan 81, See a; sp AD-A097 892 DATE: 03/18/81 ABSTRACT: Temperature, current speed and direction, optical transmissivity electrical conductivity, and tidal stage were measured half- hourly at five three-level and one one-level stations between February 1979 and June 1980. The stations were located in the San Pablo Bay to Suisun Bay area, including Carquinez Strait, in Northern California. Their purpose was to learn more about the freshwater-saltwater circulation pattern and further verify the Corps' Sausalito-based hydraulic model of the San Francisco Bay-Sacramento-SAn Joaquin Delta region. The main report des- cribes the system of instruments and the associated data pro-KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics nearshore currents, river discharge, stream gaging, tides California, Subregion III, Bolinas Bay Cell, San Francisco Cell Transport of Radionuclides with San Francisco Bay Sediments, Progress Report. 1961-62 Water Year AUTHOR(S): Klingeman, Peter C.; Kaufman, Warren J. SOURCE: University of California, Berkeley, Sanitary Engineering Research Laboratory DATE: 07/01/63 The general objective of this study was to ascertain the ABSTRACT: distribution of radionuclides in the waters and sediments of northern portions of the San Francisco Bay system. Of particular inter- est was the distribution and movement with bay sediments, of fission products of recent fallout origin. KEYWORDS: Coastal Processes littoral sediment, longshore transport, nearshore currents California, Subregion III, Bolinas Bay Cell, San Francisco Cell, S. San

Francisco Reach

Modern Sedimentation on the California Continental Margin Adjacent to the Russian River AUTHOR(S): Klise, D. H. SOURCE: California State University at San Jose, San Jose, CA DATE: 01/01/83 ABSTRACT: Surface sediment samples from the Russian River and adjacent shelf and slope areas were analyzed for texture and mineralogy to identify the Holocene (younger than 10,000 years old) dispersal and accumulation of Russian-River sediment on the adjacent margin. Sediment, predominantly of sandto medium- silt size, from the Russian River accumulates along inner- and mid-shelf areas adjacent to the river. Sediment dispersal is largely controlled by the effects of shoaling surface-wave and unidirectional currents that combine to produce a seaward-fining trend across inner-and mid-shelf areas. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics geology, grain size, nearshore currents, offshore/onshore transport, petrology, river-bed sediment California, Subregion II, Russian River Cell Forest Land Management and Sediment Production in the River Basins of North Coastal California AUTHOR(S): Klubben, Lyle, M. SOURCE: American Water Resources Conference, 3d Annual Meeting, San Francisco, CA, GEOREF (454952 67-08247-N) DATE: 01/01/67 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics geomorphic processes, river-bed sediment, river discharge, river sediment discharge, tides, watershed sediment California, Subregion I, Subregion II, Subregion III Sedimentation in the Middle Fork Eel River Basin, California AUTHOR(S): Knott, J. M. SOURCE: U.S. Geological Survey, Department of the interior Open-File Report, 60 pages (2001-06) DATE: 06/11/71 Estimates of long-term sediment yields from several of the ABSTRACT: larger tributaries in the Middle Fork Eel River basin and probable distribution characteristics of sediment within the largest and smallest of the proposed reservoirs were made to determine the feasibility of a reservoir. Sedimentation data used in the study were obtained during 1956-58. The bulk of these data consisted of records of daily suspended-sediment discharge and analyses of

periodic sediment samples from hydrologic stations established on several of the larger tribu- taries. Special measurements were made during the 1968 storm season to determine parameters required for the indirect Muller equation. Estimates of total sediment yield were made KEYWORDS: Geomorphology, Hydrology & Hydraulics grain size, reservoirs, river discharge, river sediment discharge, sand entrapment, stream gaging California, Subregion I, Eureka Cell Preliminary Master Plan of Shoreline Development for the State of California AUTHOR(S): Knowland, Joseph R.; Dockweiler; Carrillo, Leo; Kasan, Charles SOURCE: Status Report on County Master Plan of Acquisition, 41 pages, plus maps, available at University of California, Berkeley, Water Resources Archives DATE: 05/15/46 ABSTRACT: Includes legislation, basic data, physical characteristics of the coast, method of coordinating plans of several counties, erosion problems, uses of beaches, and acquisition plans of the County Master Plans. Also included is a plan to establish state and county priorities for acquisition. KEYWORDS: Socioeconomics beaches, environmental constraints, institutions/planning/mgmt., maps, property value/land use, shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V The Geologic Setting of Bodega Head AUTHOR(S): Koehr, James E. California Department of Conservation, Division of Mines and SOURCE: Geology, Mineral Information Service, Sacramento, CA, Volume 16, Number 7, July 1963, 16 pages DATE: 07/01/63 ABSTRACT: This is a description of the geologic setting of Bodega Head. Α reactor was considered for near the seismically active San Andreas Fault Zone. Geologic maps included. KEYWORDS: Geomorphology, Socioeconomics geology, institutions/planning/mgmt. California, Subregion II, Russian River Cell, S. Russian River Reach, Bodega Bay Cell, S. Bodega Bay Reach Daily and Quasi-Weekly Beach Profile Changes at Monterey, Calif AUTHOR(S): Koehr, James E.; Rohrbough, John D. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 72

pages (AD-603 428) DATE: 06/01/64 ABSTRACT: Sand heights measured on two beach profiles, supplemented by wave and tide data, were collected on daily and quasi-weekly bases for Del Monte Beach between July 12, 1963, and March 31, 1964. This beach, composed of fine quartz sand, is located in a sheltered indentation where long, low swell prodominates. Analysis of the data revealed a dynamic beach characterized by constant daily changes in the lower, active zone. No clear-cut seasonal variation in cut and fill was evident, but large cycles of cut and fill having durations of ten to twenty days occured irregularly throughout the period. Daily sand-level changes were attributed to constantly changing wave conditions. KEYWORDS: Coastal Processes, Survey beach profiles, grain size, offshore/onshore transport, tides, wave climate, wind California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Longshore Sand Transport On Beaches AUTHOR(S): Komar , Paul D.; Inman, D. L. SOURCE: Journal of Geophysical Research, Richmond, VA, Vol. 75, No. 30, Pages 5914-5927 DATE: 01/01/70 ABSTRACT: Longshore Transport of Sand by Waves. KEYWORDS: Coastal Processes beaches, littoral sediment, longshore transport California The Channelized Flow of Turbidity Currents with Application to Monterey Deep-Sea Fan Channel AUTHOR(S): Komar, Paul D. SOURCE: Scripps Institution of Oceanography, La Jolla, California, 16 pages. Published in The Journal of Geophysical Research, Richmond, VA, Vol. 74, No. 18, Pages 4544-4558, 20 August 1969 DATE: 03/10/69 When a turbidity current is confined to a channel its upper ABSTRACT: surface has a cross-channel slope, owing to the combined effects of the Coriolis and centrifugal forces. This cross-channel surface slope for channel full flows may cause a difference in the heights of the levees that have developed on opposite sides of the channel. An equation is developed that balances the Coriolis and centrifugal forces against the pressure force that results from the surface slope. This equation can be used to calculate curves of average

velocity versus density, the two variables in the equation, and the two principal unknowns of KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology coastal currents, coastal erosion, nearshore currents, sedimentation, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Topography and Lithology of the Mendocino Ridge AUTHOR(S): Krause, D. C.; Menard, H. W.; Smith, S. M. SOURCE: Journal of Marine Research, New Haven, CT: Sears Foundation for Marine Research, Volume 22, No. 3, September 15, 1964, pages 236-250, Reprint photos, illustrations DATE: 09/15/64 Twenty-two slope-corrected bathymetric profiles of the ABSTRACT: Mendocino Ridge between 125 degrees west and 129 degrees west are pre- sented, and the method of their development is discussed. The crest of this ridge lies at an average depth of 2000m., falling off to 3200m on the north and to 4400m on the south. A short, steep scarp, fresh dredge-haul material lacking manganiferous crusts, and earthquake epicenters suggest recent faulting on the north. Basalt cobbles and pebbles were the principal constitu- uent described in the appendix (p. 247). Very well-rounded pebbles indicate that the crest was once at or above sea level. KEYWORDS: Geomorphology, Survey geology, geomorphic processes, hydrographic surveys, petrology California, Subregion II, S. Ten Mile River Reach Shore Processes and Beach Characteristics AUTHOR(S): Krumbein, W. C. SOURCE: USACE, Beach Erosion Board (now Coastal Engineering Research Center, Vicksberg, MS), Technical Memorandum No. 3 DATE: 05/01/44 ABSTRACT: This report presents the results of a scientific study of the natural variables involved in beach processes near Half Moon Bay, California. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Survey beach profiles, geology, geomorphic processes, wave climate California, Subregion III, Half Moon Bay Cell Preliminary Catalog of Tsunamis Occurring in the Pacific Ocean AUTHOR(S): Kumizi, Uda; Cox, Doak C.; Pararas-Carayannis, George SOURCE: University of Hawaii, HI, Institute of Geophysics DATE: 08/01/67 ABSTRACT: A systematic compilation of all recorded historic tsunamis in the

Pacific Ocean and adjacent seas since the beginning of recorded history is presented in table form. The data and the sources are discussed and evaluated. Errors and discrepancies of earlier lists are reconciled. Supplemental records of many tsunamis and additional data missed or omitted by earlier catalogers are included. KEYWORDS: Coastal Processes tsunamis California, Subregion I, Subregion II, Subregion III, Subregion IV Response of Foreshore Morphology to a Changing Wave Climate AUTHOR(S): Laband, B. L. SOURCE: University of California, Santa Cruz, Master's Thesis, p. 127 DATE: 01/01/84 ABSTRACT: Twenty-three high-resolution foreshore maps of a beach in Fort Ord, Monterey Bay, California were taken from June 17 to Septem- ber 4, 1981 to study the foreshore's response to changing incident-wave conditions. Three methods were used to analyze the maps. Spatial analysis of each map characterized all of the significant morphological features across the entire foreshore. Analysis of shoreline configuration along selected contour lines addressed evolution of these morphological features. Statistic- ical analysis of shoreline configuration, along these same contour lines, quantitatively compared the relationship between shoreline configuration and the incident-wave field. The fore- shore morphology at the beginning of the field study was characterized by a moderately well developed giant cuspate KEYWORDS: Coastal Processes, Geomorphology, Survey beach profiles, geomorphic processes, maps, sand bars, shoreline changes, wave climate California, Subregion IV, S. Monterey Bay Cell An Oceanographic Survey of the Coastal Waters Between San Francisco Bay and Monterey Bay, California AUTHOR(S): Labyak, Peter S. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, 312 pages DATE: 10/01/69 ABSTRACT: A detailed oceanographic survey of the coastal waters between Monterey Bay and San Francisco Bay, California, was conducted from 10 through 18 May 1969. Measurements of beam transmitt- ance, sound velocity, temperature, and particulate count were obtained. Over 500 water samples were taken for

particulate analysis. The optical properties of this region were found to be very complex. The waters appeared to be affected by flow from San Francisco Bay, littoral material, upwelling, and possibly sewage outfalls during the survey. A greater volume of water with low transmissivity and high particle count existed in the northern region of the survey area than in the southern region. An eddy system between Monterey Bay and Point KEYWORDS: Oceanography & Meteorology, Survey coastal currents, hydrographic surveys, littoral sediment California, Subregion III, Subregion IV, San Francisco Cell, Half Moon Bay Cell, S. Half Moon Bay Reach-B, Santa Cruz Cell, S. Monterey Bay Cell Photograph of Sea Cliffs at Moss Beach in Montara, San Mateo County, California AUTHOR(S): Lajoie, K. R. SOURCE: U.S. Geological Survey Photographic Library (photograph no. 1), Denver, Colorado DATE: 01/01/71 Seacliffs at Moss Beach in Montara have receded 165 feet ABSTRACT: between 1866 and 1971 (1.6 feet per year). The positions of the cliffs from an 1866 map and a 1914 photograph are marked on an overlay which is included with this 1971 photograph. KEYWORDS: Coastal Processes, Survey beaches, coastal erosion, maps, shoreline changes California, Subregion III, S. San Francisco Reach Geologic Map of Unconsolidated and Moderately-Consolidated Deposits of San Mateo County, California AUTHOR(S): Lajoie, K. R.; Helley, E. J.; Nichols, D. R.; Burke, D. B. SOURCE: U.S. Geological Survey Miscellaneous Field Studies Map, MF-575, scale 1:62,500, 2 sheets DATE: 01/01/74 ABSTRACT: The geology of unconsolidated and moderately-consolidated deposits of San Mateo County is presented in two sheets. The first sheet is a 1:62,500 scale, black-and-white, geologic map that maps only unconsolidated and moderately-consolidated deposits. The second sheet is a table describing the geologic units including information on geology, planning, and engineering properties of these units. KEYWORDS: Geomorphology, Socioeconomics, Survey cliff sediment, geology, institutions/planning/mgmt., maps California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell, S. Half Moon Bay Reach-A

Accelerated Coastal Erosion Rates in Response to the Construct- ion of the Half Moon Bay Breakwater, San Mateo County, California AUTHOR(S): Lajoie, K. R.; Tinsley, J. C.; Weber, G. SOURCE: Proceedings from Coastal tectonics and coastal geologic hazards in Santa Cruz and San Mateo Counties, California, Geological Society of America Field Trip Guidebook, 75th Annual Meeting DATE: 01/01/79 ABSTRACT: A breakwater constructed in 1959-61 to shield Pillar Point Harbor from southwest swell, profoundly disturbed the equilibrium conditions in Half Moon Bay. Wave energy formerly refracted into and dissipated in the northern end of Half Moon Bay now is reflected from the breakwater's southern terminus. Net southward longshore transport of sand is interrupted, and the beach south of the breakwater has no source of replenishment except terrace deposit cannibalism. The result is rapid erosion of terrace deposits south of the breakwater, including KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics, Survey coastal erosion, coastal erosion problems, coastal structures, maps, sand entrapment, shoreline changes California, Subregion III, Half Moon Bay Cell Mendocino Headland and Big River Beach Feasibility Study AUTHOR(S): Larson, Robert N.; Wilde, Ray; Welts, Allen; Heapala, Verner k. SOURCE: California Department of Parks and Recreation, Sacramento, CA, 17 pages DATE: 02/01/70 A study on the feasibility of preserving the Mendocino ABSTRACT: Headland and Big River Beach in Mendocino County. In response to assembly concurrent resolution number 72. Included are relevant natural coastal characteristics, history, ownership and present use, relationship to existing programs, and evaluation of respon-sibility. Maps and photos provided. KEYWORDS: Coastal Processes, Socioeconomics beaches, environmental constraints, geology, institutions/planning/mgmt., maps, property value/land use California, Subregion II, S. Ten Mile River Reach An Evaluation of a Numerical Water Elevation and Tide Current Prediction Model Applied to Monterey Bay AUTHOR(S): Lazanoff, Sheldon M. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 146

pages. (AD-722 562) DATE: 03/01/71 ABSTRACT: The Hansen Hydrodynamical-Numerical Model was evaluated for Monterey Bay with actual field data. Tides and winds are the principal driving forces of the Hansen Model. Analysis of the field data indicated that the principal driving force of the circulation in the bay was the oceanic currents and not the tides and winds. The tidal heights and phases and current directions were calculated correctly by the model, but the cal- culated current speeds were an order of magnitude too large. The inaccuracy of the current speeds was attributed to the inaccurate calculations of the currents along the open boundary and the large bathymetric gradients of the Monterey Submarine KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey coastal currents, hydrographic surveys, nearshore currents, tides, wave climate, wind California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell A Twenty Year Northern Hemisphere Wave Spectral Climatology AUTHOR(S): Lazanoff, Sheldon M.; Stevenson, N. M. SOURCE: In Turbulent Fluxs Through The Sea Surface, Wave Dynamics And Prediction, Pleneum Press, New York, NY, 1977 DATE: 01/01/77 ABSTRACT: Not Reviewed. KEYWORDS: Oceanography & Meteorology storm waves, wave climate, wave transformation, wind California, Subregion I, Subregion II, Subregion IV, Subregion V Tidal Bench Marks, State of California AUTHOR(S): Le Lacheur, E. SOURCE: U.S. Coast and Geodetic Survey, Department of Commerce, Special Publication number 141, 62 pages DATE: 01/01/78 ABSTRACT: This report gives the elevations and descriptions of bench marks along the California Coast. There is an explanation of datum planes used, tables, accuracy of the evaluations, standard bench marks, and changes in elevation. KEYWORDS: Survey bench marks, maps, tides California, Subregion I, Subregion II, Subregion IV, Subregion V Dredge Sediment Movement Tracing in San Francisco Bay Utilizing Neutron Activation AUTHOR(S): Leahy, Edward J.; Inman, Lawrence B.; Lane, William B.; McLoud, William R. SOURCE: USACE, Waterways Experiment Station, Vicksburg, MS, for USACE, San

Francisco District, San Francisco, CA, 106 pages, Tables DATE: 06/01/76 ABSTRACT: This report describes research efforts conducted to: (a) identify the chemical elements suitable for use as neutron-activable tracers, (b) tag the San Francisco Bay sediments, (c) introduce the tagged mineral particles into the dredged material, and (d) analyze the collected sediment samples. KEYWORDS: Coastal Processes grain size, littoral sediment, offshore/onshore transport, petrology California, Subregion III, San Francisco Cell A Feasibility Study of Mainland Shelf Undersea Aqueduct-Coastal Delivery of Waters of the Eel, Klamath, and Rogue Rivers to Cen- tral and Southern Cal AUTHOR(S): Lee, Fred C. SOURCE: National Engineering Science Company, Pasadena, CA, 42 pages DATE: 08/01/65 ABSTRACT: This presentation outlines the essential elements for the pro- posed plan of utilization of undersea aqueducts to transport waters of the Eel, Klamath, and Rogue Rivers to Central and Southern California. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal structures, environmental constraints, institutions/planning/mgmt., offshore/onshore transport, reservoirs, shoreline use California, Subregion I, Subregion II, Subregion IV An Undersea Aqueduct System for Coastal Delivery and Southern California AUTHOR(S): Lee, Fred C. SOURCE: National Engineering Science Company, Pasadena, CA, 17 pages DATE: 06/13/66 Report concerns the development of an undersea aqueduct ABSTRACT: system along the Pacific Coast for the transfer of large quantities of fresh water from Northwestern California to other areas of need in California and the Pacific Southwest. The plan involved the Eel, Klamath, and Rogue Rivers and their adjacent streams for a yield of approximately 15 million acre-feet of high quality water. Discusses technology needed and conservation necessary for the project, provides maps and chart of river and streams involved. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics environmental constraints, institutions/planning/mgmt., maps, population, river discharge California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V, Klamath River Cell, Eureka Cell

Ocean Environment and Design Considerations in a Prerecon- naissance Study of a California Undersea Aqueduct AUTHOR(S): Lee, Fred C. SOURCE: U.S. Department of the Interior, Bureau of Reclamation DATE: 05/16/69 ABSTRACT: Report to assess the desirability of conducting an economic and technical reconnaissance study of conveyance of water from the Eel and Klamath Rivers to Central and Southern California by means of one or more aqueducts placed offshore on the Continental Shelf. Bathymetric survey information, strip maps drawn of the route zone, and environmental parameters were studied. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics, Survey environmental constraints, hydrographic surveys, institutions/planning/mgmt., river discharge California, Subregion I, Subregion II, Subregion IV, Subregion V, Klamath River Cell, Eureka Cell Recent Sediments of the Central California Continental Shelf: Pigeon Point to Sand Hills Bluffs, Part A: Introduction and Grain Size Data AUTHOR(S): Lee, James; Yancy, T. E.; Wilde, Pat University of California, Berkeley, Hydraulic Engineering SOURCE: Laboratory, Technical Report(HEL-2-28), 62 pages, unbound copies in envelope with handwritten grain analysis sheets, maps, graphs DATE: 10/01/70 ABSTRACT: This work was part of a continuing study of sediments and sedimentary processes of the Continental shelf of central California. The area covered by the report extends from Pigeon Point in the north to Sand Hill Point in the south. The methods of sediment analysis employed in the study were grain size analysis followed by heavy mineral analysis and interpretation. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment, river-bed sediment California, Subregion III, Subregion IV, S. Half Moon Bay Reach-A, S. Half Moon Bay Reach-B Recent Sediments of the Central California Continental Shelf: Pillar Point to Pigeon Point: Part B, Mineralogical Data AUTHOR(S): Lee, James; Glogoczowski, M; Yancey, T.; Wilde, P. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Report No. HEL-2-31, 63 Pages DATE: 06/01/71 ABSTRACT: The heavy mineralogy of the sand fraction for 44 offshore, 9 beach,

and 3 stream samples for the central California continental shelf was determined optically. For each sample the percentage of the more abundant or more diagnostic transparent minerals was plotted graphically in order of persistence. Additional data on accessory transparent minerals, opaques, and composite grains (rock fragments) are listed. The treated size fractions were divided further by separation in the heavy liquid tetrabrom-ethane. KEYWORDS: Coastal Processes, Geomorphology beaches, geology, grain size, littoral sediment, California, Subregion III, Subregion IV, S. Half Moon Bay Reach-A, S. Half Moon Bay Reach-B Major Heavy Mineral Assemblages and Heavy Mineral Provinces of the Central California Coast Region AUTHOR(S): Lee, James University of Malaya, Department of Geology, Kuala Lampur SOURCE: Geological Society of America, Boulder, CO, Bulletin 83(7): 2099-2103, July 1972, Oceanic Abstracts (73-00666) DATE: 07/01/72 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology cliff sediment, geology, littoral sediment, petrology, river-bed sediment California, Subregion II, Subregion III, Subregion IV, Subregion V Interim Report on Coastal Harbors of Refuge; California Small Craft Harbors and Facilities Plan AUTHOR(S): Leeds, Hill, and Jewett, Inc. Prepared for the Division of Small Craft Harbors, Department of SOURCE: Parks and Recreation, by Leeds, Hill and Jewett, Inc., San Francisco, CA, 1963 DATE: 01/01/63 ABSTRACT: A survey to determine the need, location and major components needed for harbors of refuge along the California coastline for small craft to include (1) characteristics of deep water waves at selected California stations (2) climatological data represenative of proposed Harbors of Refuge. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics climatology, coastal structures, growth potential/recreation, maps, storm waves, wave climate California, Subregion I, Subregion II, The Development of Crescent City Harbor, California AUTHOR(S): Leidersdorf, Craig University of California, Berkeley, unpublished Paper for Prof. SOURCE: J.W. Johnson, 1975, archived at Water Resources Archives

DATE: 09/09/75 ABSTRACT: Crescent City Harbor is a small commercial and small-craft harbor of shallow draft located on the northern California coast. The physical environment of the area is quite severe, particularly in regard to winter storms and summer fog. Corps of Engineers improvements, constructed between 1925 and 1973, include a 4,700-foot outer breakwater forming the western boundary of the harbor, a 20-foot deep (MLLW) dredged basin just east of the outer breakwater, a 2,400-foot sand barrier on the eastern side of the harbor, and a 1,600foot inner breakwater which in conjuction with the sand barrier and an adjacent island protects an outer boat basin. KEYWORDS: Socioeconomics coastal structures, growth potential/recreation, littoral sediment, tides, wave climate, wind California, Subregion I, S. Smith River Reach, Klamath River Cell Dissolved Solids Discharge to the Oceans from the Conterminous United States AUTHOR(S): Leifeste, Donald K. SOURCE: U.S. Geological Survey, Circular No. 685, 8 pages and figures DATE: 01/01/74 ABSTRACT: Dissolved-solids data from 54 river basins for 1966-69 were used to compute the amount dissolved material contributed to the oceans from the conterminous United States. The computations show that about 264,000,000 tons are discharged annually. The Gulf of Mexico receives the largest load, about 183,000,000 tons, of which about 157,000,000 tons are contributed by the Mississippi River. The Atlantic Ocean receives about 37,500,000 tons, and the Pacific Ocean about 43,400,000 tons. Average yearly yeilds range from 26 to 231 tons per square mile and average about 100 tons per square mile. KEYWORDS: Geomorphology, Hydrology & Hydraulics river discharge, river sediment discharge California, Oregon, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V An Investigation of Bottom Changes in Monterey Harbor(1932-1969) AUTHOR(S): Lennox, Richard J. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 179 pages (AD-706 032) DATE: 06/01/69 ABSTRACT: Bottom changes occurring in Monterey Harbor from 1932-1969 were analyzed by numerical computer methods using 15 selected hydro- graphic surveys.

The long-term shoaling rate has been 0.4 to 4.0 feet per breakwater; and less than 0.25 feet per decade in the stable outer harbor. The accretion rate averaged 17,500 cubic yards per year from 1932-1969, but only 7,100 cubic yards per year from 1947 to 1969. The shoaling is believed due to the construction of the Coast Guard breakwater in 1931-1934. It was determined that prior to 1960 the excess sand was carried into the harbor by littoral transport from Del Monte Beach and by wave currents around the breakwater. Construction of the solid wall on Wharf 2 in 1960 cut off the former sand supply. KEYWORDS: Coastal Processes coastal structures, hydrographic surveys, littoral sediment, longshore transport, sand entrapment, sedimentation California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell A Study of Seaward Dipping Internal Structure in Marine Ripple Marks at Whaler's Cove, California AUTHOR(S): Leopold, Lawrence C. SOURCE: California State University, Moss Landing Marine Laboratories, Moss Landing, CA, Technical Publication 72-6, photos, illustrations, tables DATE: 08/01/72 ABSTRACT: Experiments were conducted to test whether structures within large scale ripple marks, 8-21 m deep, when built under the influence of shoaling waves, dipped shoreward. Previous work has demonstrated the above relationship to hold in water 1-4 m deep. SCUBA divers using the Senckenberg box core technique sampled large scale ripple marks composed of coarse grain, highly bioclastic, unconsolidated sediments. The sampling site was an elongate channel-like body in the entrance of Whaler's Cove, Point Lobos State Reserve, near Carmel, California. KEYWORDS: Coastal Processes sedimentation, wave transformation California, Subregion IV, Subregion V, Carmel River Cell, S. Carmel River Reach California's Stormy Weather AUTHOR(S): Lerner, Michael A.; Lubenow, Gerald C.; Contreras, Joe SOURCE: Newsweek, New York, NY, 14 March 1983, Pages. 26-27 DATE: 03/14/83 ABSTRACT: This is a description of the freak tornadoes, flash floods, and 25 foot surf along the coastline and the damage caused. It was estimated that there were \$200 million in damages and at least 19 dead. KEYWORDS: Socioeconomics

property value/land use, storm damage, storms/floods, storm waves, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Source Area and Abrasional History of the Coarse Fraction of Point Reyes Beach Sediment AUTHOR(S): Leslie, Kenneth C. SOURCE: University of California, Berkeley, M.S. Thesis, 106 leaves, illustrations, tables, folding, maps, photos in pocket DATE: 01/01/74 ABSTRACT: The coarse fraction (4-to-10 milimeter size class) presently found along Point Reyes Beach was derived primarily from within the Russian River Drainage Basin, during a single cycle of erosion, transport, and deposition. This has occurred during the most recent interglacial cycle. KEYWORDS: Coastal Processes, Geomorphology geology, grain size, littoral sediment, longshore transport, petrology, watershed sediment California, Subregion II, Subregion III, Russian River Cell, S. Russian River Reach, Bodega Bay Cell, S. Bodega Bay Reach, Point Reyes Cell Movement of Sedimentary Material Along a Section of Northern California Coast AUTHOR(S): Leslie, Kenneth C. SOURCE: Paper prepared for Coastal Zone March 1978, American Society of Civil Engineers, New York, NY, 20 pages, graphs, tables DATE: 03/01/78 ABSTRACT: This study investigated the provenance, transport, and desposit- ion of the coarse sedimentary material (4-to-10 milimeter size class) presently found along the Northern California coast between the Russian River and Point Reyes Peninsula. Source area interpretation indicates that the most likely source for the described sediment is found within the Russian River Drainage Basin. A model is advanced that describes the movement of sedimentary material through the Russian River/coastal system during a complete interglacial cycle. The coarse material presently along Point Reyes Beach appears to be dominated by material that was derived, transported and deposited during the KEYWORDS: Coastal Processes, Geomorphology geology, grain size, littoral sediment, longshore transport, petrology, watershed sediment California, Subregion II, Subregion III, Russian River Cell, S. Russian River Reach, Bodega Bay Cell, S. Bodega Bay Reach, Point Reyes Cell

Continuity and Tectonic Implications of the San Simeon-Hosgri Fault Zone, Central California AUTHOR(S): Leslie, R. B. SOURCE: U.S. Geological Survey, Open-File Report 81-430, p. 59 DATE: 01/01/81 High-resolution seismic reflection data off central ABSTRACT: California were interpreted, in conjunction with pre-existing seismic and aeromagnetic data, to determine if there is a connection between the offshore Hosgri fault and the onshore San Simeon fault. The faults were found to be connected. This connection allows, but does not prove, large right lateral offset along the San Simeon- Hosgri fault trend. KEYWORDS: Geomorphology geology, neotectonics California, Subregion V, S. Point Sur Reach There is Nothing Left, The Out-House is Gone AUTHOR(S): Lewis, Charles R. IV SOURCE: Unknown University research paper (unpublished), submitted to Prof. Eugene C. Lee, available at USACE, San Francisco District, San Francisco, CA DATE: 01/01/73 ABSTRACT: A critique of the U.S. Army Corps of Engineers, San Francisco District report on Beach Erosion at El Granada Beach, San Mateo County, California. Discussion of changes in littoral drift and nearshore currents as a result of construction of the Half Moon Bay Breakwater. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology beaches, coastal erosion, coastal erosion problems, coastal structures, longshore transport, nearshore currents California, Subregion III, Half Moon Bay Cell Planning for Coastal Recreation Opportunities Near Large Urban Areas: A Study Relating Transportation and Recreation AUTHOR(S): Lijesen, D. P.; Snir, Y.; Rosing, J.; Skurski, K. Intasa, Menlo Park, California, 110 pages, Water Resources SOURCE: Abstracts (092285 W76-01516), Minneapolis, MN: Environmental Hydrology Corporation DATE: 07/01/75 ABSTRACT: The thrust of this research was to identify the type of information that the recreation planner should develop during the planning process. Α sensitivity approach is proposed to develop information on number of people and geographic distribution of recreational visitation. An approach is presented for modeling the accessibility of recreation resources as a function of demand for activities, supply of opportunities, and the highway network connecting

demand centers and supply zone. The specific case of planning for coastal recreation opportunities along the California central coastal zone near the KEYWORDS: Socioeconomics beaches, environmental constraints, institutions/planning/mgmt., population, urbanization California, Subregion III, Subregion IV Data for Time of Travel Study of Eel River, California AUTHOR(S): Limerinos, J. T. SOURCE: U.S. Geological survey, Open-File Report, 38 pages DATE: 08/31/67 ABSTRACT: Injection and downstream detection of a water-soluble fluores- cent dye were used during the period April to July 1966 to define the travel time for river flows through an 11-mile reach from Scott Dam (Lake Pillsbury) to Van Arsdale bridge, and for river flows through a 101.5-mile reach from Hearst bridge to South Fork bridge. The total 112.5 miles under points of accessibility to the river for monitoring and dye-injection purposes. KEYWORDS: Hydrology & Hydraulics river discharge, stream gaging California, Subregion I, Eureka Cell Dynamic Considerations of Beach Erosion and Protection. A Case Study of Stinson Beach, California AUTHOR(S): Lin, Newman K. SOURCE: University of California, Berkeley, unpublished student paper, archived at University of California, Berkeley, Water Resources Archives (Wiegel), 58 pages DATE: 03/01/79 ABSTRACT: A study of the Stinson Beach area focusing on winds, waves, swell, tides, currents, beach erosion, shore protection, dynamic forces of Bolinas Bay and Lagoon, and an environmental impact report of considered protective and preventive structures. KEYWORDS: Coastal Processes, Geomorphology longshore current, longshore transport, offshore/onshore transport, tides, wave climate, wind California, Subregion III, Bolinas Bay Cell The Reputed Destructive Earthquake of January 16-18, 1840 AUTHOR(S): Louderback, George D. SOURCE: Bulletin of the Seismological Society of America, Berkeley, CA, Volume 34, pages 103-107, photocopy DATE: 01/01/44 ABSTRACT: Examination of historical accounts of the events of January 16- 18,

1840, indicating that there is lack of evidence to suppose an earthquake or tidal wave occurred. KEYWORDS: Coastal Processes, Geomorphology geomorphic processes, neotectonics, tsunamis California, Subregion IV, Santa Cruz Cell Sediment Transport in Cache Creek Drainage Basin in the Coast Ranges West of Sacramento, California AUTHOR(S): Lustig, Laurence K.; Busch, Robert D. U.S. Geological Survey Professional paper 562-A, California SOURCE: Department of Water Resources, U.S. Government Printing Office, Washington, D.C., pages 36 DATE: 01/01/67 ABSTRACT: This report examines sediment-transport characteristics of streams in Cache Creek drainage basin during the 1960-1963 period. Graphs, tables, and photoghraphs included. KEYWORDS: Hydrology & Hydraulics geology, maps, river sediment discharge California, Subregion III Long Wave Study of Monterey Bay AUTHOR(S): Lynch, Thomas J. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 89 pages, Water Resources Abstracts (068443 W74-03615) DATE: 09/01/70 ABSTRACT: The effect of the Monterey Submarine Canyon on seiching within Monterey Bay and on long wave oscillations within the bay was studied by analyzing synchronized wave record at each end of the bay. Power spectra and cross spectra calculated for five periods selected from six months continuous data indicate the Monterey Canyon has a profound effect on the bay's oscillating basins each having recurring long-period waves which persist during significant long-wave activity. Extensive reference is made to the work of Wilson, Hendrickson and Kilmer (1965) in their feasibility study for a surgeaction model of Monterey Harbor, California. KEYWORDS: Coastal Processes, Oceanography & Meteorology submarine canyons, wave climate, wave transformation California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Sand Variation of a Beach and Offshore Area Near Bodega Head, California AUTHOR(S): MacFarlane, Ian C. SOURCE: University of California at Davis, Davis, CA, Master's Thesis, 1971 DATE: 07/01/71 Study of the variations in statistical parameters of grain ABSTRACT: size in

relation to sediment composition and environmental forces as a means of qualitatively determining the pattern of net littoral and offshore transport. Grain size data from sieve analysis of 194 offshore and 107 beach samples, combined with mineralogical data, reveal distinct segregation of sediment types near Bodega Head. KEYWORDS: Geomorphology beaches, beach profiles, geology, grain size, littoral sediment, petrology California, Subregion II, Russian River Cell, Recent Changes in Channel-Stored Sediment, Redwood Creek, California AUTHOR(S): Madei, Mary A. National Park Service, Redwood National Park, CA, Research and SOURCE: Development, Technical report II, 54 pages DATE: 05/01/84 ABSTRACT: Study on the sedimentation process of Redwood Creek and its changes. Aerial photography and field measurements are included. KEYWORDS: Geomorphology, Hydrology & Hydraulics aerial photography, river-bed sediment, river sediment discharge, sedimentation California, Subregion I, Klamath River Cell Redwood Creek Channel Maps AUTHOR(S): Madei, Mary A. SOURCE: National Park Service, Redwood National Park, CA, Research and Development, Technical Report 13 DATE: 11/01/84 ABSTRACT: Maps of the Redwood Creek Basin. Showing the locations of streamside landslides, gravel bars and terraces in Redwood Creek. KEYWORDS: Geomorphology, Hydrology & Hydraulics maps, river-bed sediment, watershed sediment California, Subregion I, Klamath River Cell The Tsunami of May 1960 as it Affected Northern California AUTHOR(S): Magoon, Orville T. SOURCE: American Society of Civil Engineers, New York, NY, Hydraulics Division Conference, University of California, Davis, 19 pages, tables, maps DATE: 08/17/62 ABSTRACT: Presents a summary of available information on a Tsunami as it pertains to the Northern California coast, including areas of origin and proposed methods of generation. Tsunami travel times and speed are also discussed. Damages and effects of the Tsunami of May 1960 to the Northern California coast are given with reference to records of the Tsunami at Crescent City, where three recorders, and at San Francisco Bay where 33 recorders were in operation. The effect of the Tsunami in San Francisco Bay could not be observed on the records above Benicia. KEYWORDS: Coastal Processes, Oceanography & Meteorology

storm damage, tsunamis California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Design and Construction of Rubble-mound Seawalls at Santa Cruz, California AUTHOR(S): Magoon, Orville T. SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 01/01/63 ABSTRACT: This paper presents information on the design and construction of rubble-mound seawalls. Illustrates a means of arresting major erosion of a soft rock cliff formation by ocean waves and currents. Prior to construction of the seawalls, considerable public and private property and about two blocks of one of the major scenic drives in the City of Santa Cruz had been progressively undermined and eroded. Further erosion of critcal areas has been prevented by construction of the seawalls. Several areas previously completely eroded have been reclaimed. KEYWORDS: Coastal Processes coastal erosion, coastal structures, shore protection California, Subregion IV, Santa Cruz Cell Design and Construction of Rubble-Mound Seawalls at Santa Cruz, California AUTHOR(S): Magoon, Orville T. SOURCE: U.S. Federal Interagency Sedimentation Conference, Jackson, Mississippi, January 28-February 1, 1963, 5 pages, 3 plates DATE: 02/01/63 ABSTRACT: This paper presents information on the design and construction of rubble-mound seawalls. Illustrates a means of arresting major erosion of a a soft rock cliff formation by ocean waves and currents. Prior to construction of the seawalls, considerable public and private property and about two blocks of one of the major scenic drives in the City of Santa Cruz had been progressively undermined and eroded. Further erosion of critical areas has been prevented by construction of the seawalls. Several areas previously completely eroded have been reclaimed. KEYWORDS: Coastal Processes, Socioeconomics coastal erosion, coastal structures, nearshore currents, shore protection, storm waves California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell Structural Damage by Tsunamis AUTHOR(S): Magoon, Orville T.

Proceedings, Coastal Engineering Conference, Santa Barbara, SOURCE: California, American Society of Civil Engineers, New York, NY DATE: 10/11/65 ABSTRACT: Presents a brief discussion of structural damage by Tsunamis. Discusses the March 1964 tsunami and its effects at Crescent City, California. Table 2 is a "Summary of Recent Tsunamis Along Northern California Coast" for the three occurances of 1946, 1960, and 1964. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics property value/land use, tsunamis California, Subregion I, Subregion II, Subregion IV, S. Smith River Reach, Klamath River Cell Effect of Long Period Waves on Hydrographic Surveys AUTHOR(S): Magoon, Orville T.; Sarlin, William O. SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, reprint 8-71, pages 2251-2265, illustrations DATE: 09/01/70 In conjunction with routine hydrographic surveys at Santa ABSTRACT: Cruz Harbor, California, bottom elevation discrepancies were observed which were not associated with positional errors. It was suspected that these errors were associated with long period wave activity, common at this particular location on the Pacific Coast. Based on the analysis of 50 repetitions of well monumented cross sections in Santa Cruz Harbor, it was concluded that long period waves affect the results of hydrographic surveys by slowly varying the datum plane. In the case of Santa Cruz Harbor, the maximum error due to this effect would be about +/- 1.5 feet. KEYWORDS: Coastal Processes, Survey hydrographic surveys, wave climate California, Subregion IV, Santa Cruz Cell Use of Satellites in Coastal Engineering AUTHOR(S): Magoon, Orville T.; Jarman, John W.; Berg, Dennis W. SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, Report No. CERC-Reprint-4-72, 23 pages, (AD-754 890) DATE: 08/01/71 ABSTRACT: The report explores possible international cooperation using the ERTS and other satellites in coastal engineering and coastal processes, by providing satellite imagery of desired locations over an extended period of time and by exchanging technical evaluations of satellite imagery developed in research programs in this country. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey

coastal erosion problems, nearshore currents, remote sensing, shoreline changes, shore protection, storm damage California, Subregion I, Subregion II, Coastal Sand Mining in Northern California, U.S.A. AUTHOR(S): Magoon, Orville T.; Haugen, John C.; Sloan, Robert L. SOURCE: Proceedings of the 13th Coastal Engineering Conference, July 10 - 14, 1972, Vancouver, B.C., American Society of Civil Engineers, New York, NY DATE: 07/14/72 The commercial mining of sand at coastal locations along ABSTRACT: California has been a continuing activity at some sites, spora- dic at others, and altogether discontinued at still other sites. This mining activity includes all methods of sand mining (drag- line, self-propelled bottom-dump scrapers, diesel shovels, etc.) and may be classified by littoral zone location as (1) mining from a beach foreshore or backshore area wetted by the normal tidal range, (2) mining within a river mouth or other estuary upstream from the ocean but still within the tidal zone, and (3) mining from bluff or dune areas not wetted by the normal range of tides but still within the littoral system. Processing KEYWORDS: Coastal Processes, Socioeconomics beaches, dunes, littoral sediment, mining, shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, S. Monterey Bay Cell Damages to Coastal Structures AUTHOR(S): Magoon, Orville T.; Sloan, Robert L.; Foote, Gary L. SOURCE: American Society of Civil Engineers, New York, NY DATE: 06/01/74 ABSTRACT: Coastal Engineering literature contains many references to coastal structures in the design or construction stage but few references to these same structures concerning their maintenance effectiveness subsequent to completion. This paper describes a successful long-term maintenance history of major coastal public structures in California. It is concluded that proper design combined with prudent maintenance will result in effective coastal structures with long economic lifetimes. KEYWORDS: Coastal Processes coastal structures, storm damage California, Subregion I, Subregion II Design and Construction of Humboldt Jetties, 1975 to 1980

AUTHOR(S): Magoon, Orville T.; Sloan, Robert L.; Shimizu, Nobuyuki

SOURCE: Proceedings of the 15th Coastal Engineering Conference, Honolulu, Hawaii, July 11-17, 1976, American Society of Civil Engineers, New York, NY DATE: 07/17/76 ABSTRACT: Due to the severe wave action, a number of rubble-mound construction techniques and materials have been used at the Humboldt Jetties. Among those were concrete cubes, tetrahedrons and finally delosse armor units. A description is given of the construction and associated results. Experience with the reinforced and unreinforced concrete dolosse units is discussed. KEYWORDS: Coastal Processes coastal structures, storm waves California, Subregion I, Eureka Cell Sediment Production in the Eel River Drainage of California and its Relation to Watershed Management AUTHOR(S): Magura, Lawrence M. Unpublished Student Report, available at Unviersity of SOURCE: California, Berkeley, Water Resources Archives, 22 pages DATE: 01/01/72 ABSTRACT: Relationship between current short-term discharged suspended sediment records and long-term geologic evidence of erosion and deposition is discussed. Maps, tables, and photos are provided. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics environmental constraints, geology, maps, river sediment discharge, sedimentation, watershed sediment California, Subregion I, Eureka Cell Sea-Floor Instabiliy of the Continental Shelf Offshore Central and Northern California AUTHOR(S): Mahmood, A.; Son, R. SOURCE: BBN-Geomarine Services Co., Oxnard, CA, In: Recommendations for Baseline Research in Central and Northern California Relative to Offshore Resource Development; Proceedings of Conference DATE: 01/01/77 The continental shelf along central and northern California ABSTRACT: coast is very narrow as compared to other coastal areas of United States. The narrow shelf width may force offshore exploration in some steep areas. The potential for sea-floor instability was evaluated as it would influence offshore resource development facilities. From available data, a sketchy assessment of slope instability potential was made. A figure shows areas of moderate and steep slopes along the central and northern California coast. The areas are within the 600 feet water depth.

KEYWORDS: Geomorphology geology, hydrographic surveys California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V A Pebble-Cobble Deposit in Monterey Bay, Calif AUTHOR(S): Malone, Michael J. SOURCE: U.S. Naval Postgraduate School, Monterey, CA DATE: 06/01/70 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology beaches, geology, geomorphic processes, grain size California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell H.F. Radar Measurements of the Near Surface Current in Support of the June 1980, Point Sur, Cold Wedge Cruise Pilot Study AUTHOR(S): Maresca, Joseph W., Jr.; Carlson, Chistopher T.; Padden, Robin R. SOURCE: SRI International, Stanford, CA, Final Report, 88 pages DATE: 10/01/81 ABSTRACT: H.F. radar measurements of the currents in the upper 50 cm of а water column were made across a wedge of cold water (10 C) found south of Pt. Sur, California. The radar measurements were made between 17 and 19 June 1980 at two antenna sites separated by 17 km. One map of the current component directed along the radar axis was made from the R/V ACANIA between 15 and 19 June 1980. Strong persistent northwest winds (approximately parallel to the coast) were observed during the entire cruise and radar measure- ment period that were consistent with a strong coastal upwelling condition. KEYWORDS: Coastal Processes coastal currents, nearshore currents, remote sensing California, Subregion V, Point Sur Cell, S. Point Sur Reach A Sea-swell Recording Study at Half Moon Bay, California AUTHOR(S): Marine Advisers, Inc. SOURCE: Marine Advisers, Inc., La Jolla, California DATE: 11/01/63 ABSTRACT: A wave-recording system, employing a pressure sensor with high- pass frequency response, was operated at Halfmoon Bay, Calif., 22 August 1962-22 August 1963. Resulting strip-chart records were analyzed for the "significant" height and period of waves at times corresponding to the four daily U.S. Weather Bureau synoptic map times. Equipment and operating procedures are described. methods of analysis are explained, a historical account of the observation

period is given, and the data are summarized monthly, as well as for the entire observation year. A discussion of results is presented, together with conclusions. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion III, Half Moon Bay Cell A Long-Wave and Wind Recording Study at Half Moon Bay, California AUTHOR(S): Marine Advisers, Inc. SOURCE: Marine Advisers, Inc., La Jolla, California DATE: 03/01/64 ABSTRACT: Long-wave (seiche) and wind-recording systems were operated at Half Moon Bay Harbor, California, 18 Dec. 1962 - 31 Dec. 1963. Resulting strip-chart records were analyzed for the height and apparent period of the dominant mode of seiche, and for the 15-minute-average (or sustained) speed and direction of wind, at times corresponding to the four daily U.S. Weather Bureau synoptic-map-times. Four estimates of energy-spectra were obtained from selected long-wave recordings. The instrumentation and its calibrating and operating procedures are described, methods of data reduction and analysis are explained, a historical account of the observation period is given, and the data are summarized for each month and for the entire observation period. A modest KEYWORDS: Coastal Processes wave climate, wind California, Subregion III, Half Moon Bay Cell A Broad-Frequency-Band Wave Study at Monterey Harbor, California AUTHOR(S): Marine Advisers, Inc. SOURCE: Marine Advisers, Inc., La Jolla, California DATE: 07/01/64 ABSTRACT: The purpose of this study is to gather basic wave data in a broad frequency band--encompassing the range from local sea to long waves up to 70-minutes in period -- at Monterey Harbor, California for various applications relating to the authorized breakwater plans. To this end, three filterless differential pressure wave sensors were maintained in the harbor from October 1963 through April 1964. Digital data were recorded concurrently from each sensor every two seconds on magnetic tape, and analogue data were recorded sequentially for pre-assigned durations on strip charts. An electronic band-pass filter eliminated sea-swell and tides from the analogue record of Sensor 1 and 2, thereby exhibiting the long waves, or seiche. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation

A Sea-Swell Recording Study at Santa Cruz, California AUTHOR(S): Marine Advisers, Inc. SOURCE: Prepared for USACE, San Francisco District by Marine Advisers Inc., La Jolla, California, November, 1964 DATE: 11/01/64 ABSTRACT: The purpose of this study was to gather basic sea-swell data off the then newly-constructed jetties at Santa Cruz Harbor, California. Data was collected for a one-year period commencing 1 October 1963, with particular attention to cases of severe waves which could disturb the analysis on the seaward slope of the west jetty. The sea-swell sensor consequently was installed at the indicated location to minimaze the recording of wave regimes actually acting upon the structure. Continuous wave- records were obtained on strip-charts and magnetic tapes by shore-based recorders. The stripchart records were analyzed to obtain the significant wave height and period near the four daily U.S. Weather Bureau synoptic map times: 0400, 100, 1600, KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion IV, Santa Cruz Cell Sparker Survey, Monterey Harbor California AUTHOR(S): Marine Geophysical Services Corp. USACE, San Francisco District by Marine Geophysical Services SOURCE: Corp., Houston, TX, 1963 DATE: 06/18/63 ABSTRACT: This report and the accompanying maps and cross sections present the interpretation of the sparker survey conducted by Marine Geophysical Services Corp, for the U.S. Army Engineers, San Francisco District, during May 1963. The purpose of this survey was to gain subsurface information pertinent to the planning of breakwater construction at Monterey Harbor, California. KEYWORDS: Survey coastal structures, geology, hydrographic surveys, remote sensing California, Subregion IV, S. Monterey Bay Cell Coastal Currents Along the Pacific Coast of the United States AUTHOR(S): Marmer, H. A. SOURCE: U.S. Coast and Geodetic Survey, Publication No. 121, 80 pages, tables, diagrams DATE: 01/01/26 The investigation of the currents along the coast was ABSTRACT: undertaken to

California, Subregion IV, S. Monterey Bay Cell

aid mariners in navigating. Attention was first directed to the Pacific coast of the United States, because there the currents constitute an important factor in coastal navigation. Along the more than thousand miles of shore line, from the Mexican border to the Strait of Juan de Fuca, harbors are many miles apart, sailing courses long, and periods of thick weather of comparatively frequent occurrence. KEYWORDS: Coastal Processes coastal currents, longshore current, tides California, Subregion I, Subregion III, S. Eureka Reach, San Francisco Cell Monterey Submarine Canyon California: Genesis and Relation to Continental Geology AUTHOR(S): Martin, Bruce D. SOURCE: University of Southern California, Los Angeles, CA, Dissertation Abstracts, Volume 25, No.9, 5213-5214, American Association of Petroleum Geologists Bulletin, Volume 49, No.10 1764 pages DATE: 01/01/65 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology geology, geomorphic processes, shoreline changes, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Geology of Monterey Canyon, California AUTHOR(S): Martin, Bruce D.; Emery, K. O. SOURCE: The American Association of Petroleum Geologists Bulletin, Tulsa, OK, Volume 51, No. 11, Pages 2281-2304, 9 figures DATE: 11/01/67 ABSTRACT: Not reviewed. KEYWORDS: Geomorphology geology, geomorphic processes, sea level change, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Resource Assessment of Sand, Gravel, and Shell Deposits on the Continental Shelf of Northern and Central California AUTHOR(S): Martindale, S. G.; Hess, H. D. SOURCE: Appendix no. 7 in Outer Continental Shelf Hard Minerals Leasing Program Feasibility Document (available from NTIS as pb-192593) DATE: 01/01/79 ABSTRACT: Volumetric estimations were determined for sand, gravel and shell deposits on the continental shelf of northern and central California. The

purpose of this assessment was to explore the economic feasibility of mining the deposits. The volume estimates were based on the aerial extents and assumed thick- nesses of the deposits. Offshore of California, extensive deposits of sand, and less extensive gravel and shell deposits, exist within 5 km of shore, but are mostly at water depths greater than 50 m which is beyond reach of present mining methods. Closer than 5 km to shore, extensive deposits of sand, and less extensive gravel and shell deposits, are largely within KEYWORDS: Geomorphology grain size, mining California, Subregion I, Subregion II, Subregion IV, Subregion V Bibliography of Geology of Monterey Bay, California, Report AUTHOR(S): Mason, Grace SOURCE: U.S. Naval Postgraduate School, Monterey, CA DATE: 01/01/70 ABSTRACT: Not reviewed. KEYWORDS: Geomorphology beaches, dunes, geology, geomorphic processes, shoreline changes, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Drastic Increase in Cliff-Retreat Rates Due to a Lack of Geolo- gic Input into the Design of Half Moon Bay Breakwater AUTHOR(S): Mathieson, S. A.; Lajoie, K. R. SOURCE: Association of Engineering Geologists, Program of National Meeting, Volume 26, 1983, 85 pages DATE: 01/01/83 ABSTRACT: Not reviewed. KEYWORDS: Geomorphology cliff sediment, coastal erosion, coastal structures, geology, storms/floods California, Subregion III, Half Moon Bay Cell Relevant Information and Data for the Design of a Terminal for Supertankers Offshore of Humboldt Bay, California AUTHOR(S): Mayor-Mora, Ramiro E. SOURCE: University of California, Berkeley, Department of Civil Engineering, Division of Hydraulic and Sanitary Engineering, unpublished, available at Water Resources Archives (Wiegel) DATE: 12/08/69 ABSTRACT: Compiled data for the design and construction of a supertanker

terminal off Humboldt Bay. Topics include geography, climate, geophysics, shore and sea floor characteristics, nearby river basin runoff data, bathymetry, tides, currents, wave climate, tsunamis, navigation, three design plan options, design considerations, public policy. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics, Survey coastal structures, hydrographic surveys, California, Subregion I, Eureka Cell Model Study of Wave Conditions at a Proposed Small-Craft Basin Crescent City Harbor California. AUTHOR(S): Mayor-Mora, Ramiro E. University of California, Berkeley, Hydraulic Engineering Lab-SOURCE: oratory, prepared for California Department of Navigation and Ocean Development, 8 leaves, illustrations (19 photos in pocket) DATE: 11/09/71 ABSTRACT: This was a model study of wave conditions at a proposed small- craft basin Cresent City Harbor, California. It was conducted to determine the wave pattern in the Lee of the existing "inner" breakwater, and the relative wave heights at several locations in the access channel, the entrance and the proposed basin. Also included were the wave conditions for a 400-ft. extension to the "inner" breakwater. KEYWORDS: Coastal Processes coastal structures, institutions/planning/mgmt., wave climate, wave transformation California, Subregion I, S. Smith River Reach, Klamath River Cell Seafloor Mechanics North of Cape Mendocino, California AUTHOR(S): McEvilly, T. V. SOURCE: Nature, New York, NY: MacMillan Journals Ltd., Volume 220, No. 5170, pages 901-903, November 30, 1968, 1 Figure, 6 References. Oceanic Abstracts, Bethesda, MD (69-0060) DATE: 11/30/68 ABSTRACT: California Coast: Seismology; Ocean Floor Spreading; San Andreas Fault. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, neotectonics, submarine canyons California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell, S. Klamath River Reach, Eureka Cell, S. Eureka Reach Floods of December 1937 in Northern California AUTHOR(S): McGlashan, H. D.; Briggs, R. C. SOURCE: U.S. Geological Survey Water-Supply Paper 843, pages 497 DATE: 01/01/40

ABSTRACT: During the period December 6-12, 1937, streams in northern California were subjected to severe floods which exceeded previously recorded maximum discharges at 80 measurement stations. The floods were caused by an exceptionally intense rainstorm of wide extent, which formed over the Pacific Ocean and moved rapidly eastward into northern California on December 9. It was a well-defined single storm, and most of the precipitation fell within a 48-hour period. This water-supply paper presents records of flood stage and discharge at about 170 stream-measurement stations and records of storage in all the larger reservoirs. This report also includes meteorological data, results of rainfall and runoff studies, and discussions of flood characteristics. The main flood report is followed by a KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology climatology, precipitation, river discharge, stream gaging, storms/floods California, Subregion I, Subregion IV, Klamath River Cell, Eureka Cell, Santa Cruz Cell, S. Monterey Bay Cell California's Coastal Commission, An Experiment in Planning AUTHOR(S): McGowan, Judy SOURCE: University of California at Los Angeles, School of Architecture and Urban Planning, 48 pages (WP25) DATE: 07/01/73 A close look at the San Francisco Bay Conservation and ABSTRACT: Develop- ment Commission (BCDC). Its relationship with the California Coastal Zone Commission under Proposition 20 is discussed. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt. California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Tidal Currents and Time Series Observations of Hydrographic Parameter at the Head of Monterey Submarine Canyon. AUTHOR(S): McKain SOURCE: Moss Landing Marine Laboratories, Moss Landing, CA, no. 30, Technical Publications 77-05 DATE: 01/01/72 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey nearshore currents, submarine canyons, tides California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell

Tectonic Uplift of a Middle Wisconsin Marine Platform Near the Mendocino Triple

Junction, California AUTHOR(S): McLaughlin, R. J.; Lajoie, K. R.; Sorg, D. H.; Morrison, S. D. SOURCE: Geology, Vol. VII, Geological Society of America, Boulder, CO, pages 35-39 DATE: 01/01/83 ABSTRACT: An uplift wave-cut marine platform across bedrock of the Franciscan complex at Point Delgada has been tentatively correlated with the middle Wisconsin sea-level stand at 37 meters, dated about 45,000 yr B.P. The resulting implication is 44 meters of Tectonic uplift since 45,000 yr B.P. and therefore an average high rate is probably related to interaction among the Pacific Gorda, and North America plates at the Mendocino triple junction. KEYWORDS: Geomorphology neotectonics California, Subregion II, S. Spanish Flat Reach Physiography of the Northeastern Pacific AUTHOR(S): Menard, H. W.; Taylor, Howard; Pyle, Janet McGraw Hill, New York, NY SOURCE: DATE: 01/01/64 ABSTRACT: A map of the physiography of northeastern Pacific Ocean. Includes continental slope and fracture zones; also seamounts and abyssal hills. KEYWORDS: Oceanography & Meteorology, Survey geology, maps California Deep Water Wave Statistics for the California Coast AUTHOR(S): Meteorology International, Inc. SOURCE: California Department of Navigation & Ocean Development, Sacramento, CA, 6 volumes, tables, illustrations DATE: 02/01/77 ABSTRACT: Contains deep-water wave statistics from 24 years of wave hind casting by the U.S. Navy Fleet Numerical Weather Central. Pro- vides greatest amount of historical data on deep water height, period, and direction to date in CA. Purpose is to aid in planning developing, and protection of coastline. Wave data are provided at six deep-water stations, one volume per station. KEYWORDS: Oceanography & Meteorology wave climate California, Subregion I, Subregion II, Subregion IV, Subregion V Ocean Beach/Great Highway 1979 Redesign Plan, Reconsiderations on the Maintenance and Control of the Beach and Dunes. Prepared for the City of SF AUTHOR(S): Michael Painter and Associates

SOURCE: Michael Painter & Associates, San Francisco, CA, 12 pages, diagrams, tables DATE: 05/01/79 ABSTRACT: Recommendations are made in relation to the proposed redesign, relating duties and erosion control, and maintenance requirements and cost along the Great Highway from Sloat to Lincoln Blvds, in San Francisco. A reevaluation of the 1977 design plan was needed to allow for modifications in response to new information received after completion of the 1977 plan. KEYWORDS: Coastal Processes, Socioeconomics coastal erosion problems, dunes, shoreline use, shore protection California, Subregion III, San Francisco Cell Transcript of Proceedings of Hearing on Coastal Zone Legislat- ion AUTHOR(S): Milias, George W.; Wood, Bob; Barnes, Richard E.; Fong, March Κ. SOURCE: California Assembly Committee on Natural Resources and Conservation, Sacramento, CA, 112 pages DATE: 05/13/70 Study considered legislation which was to be introduced for ABSTRACT: development of a coastal plan. A detailed transcript of the hearing is provided. Fiscal implications are discussed and the proposed bill (Assembly Bill No. 640). KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., population, property value/land use, shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Dredging on the Pacific Coast; A History of the Various Uses, Their Modes of Operation, Details of Construction, and Compara- tive Merit (July 1892) AUTHOR(S): Miller, John, H. SOURCE: H.S. Crocker Company Press, San Francisco, CA, 29 pages, photos, prepared July 1892 DATE: / / ABSTRACT: This is a history of the dredging industry on the Pacific coast; the various vessels used, their modes of operation, details of construction, and comparative merit. KEYWORDS: Coastal Processes beach nourishment/dredging, sand bars, sedimentation, tidal inlets California, Subregion I, Subregion II, Subregion IV, Bolinas Bay Cell, San Francisco Cell

A study of physical and chemical conditions in San Francisco Bay especially in

relation to the tides AUTHOR(S): Miller, Robert C.; Ramage, William D.; Laxler, Edgar L. SOURCE: University of California Press, Berkeley, California, Volume 31, Number 11, pages 201 - 267, 5 figures in text and 5 charts DATE: 01/01/28 ABSTRACT: The physical conditions of San Francisco Bay including depth, salinity, temperature and nature of the bottom were studied. Also includes studies on the tidal prism, velocity of current, and dissolved oxygen. Graphs are included. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics geology, hydrographic surveys, nearshore currents, tidal inlets, tides California, Subregion III, Bolinas Bay Cell, San Francisco Cell A Model Study of Wave Refraction in a Submarine Valley AUTHOR(S): Milner, Frank SOURCE: Unpublished Student Paper, archived at University of California, Berkeley, Water Resources Archives, photos, maps, diagrams DATE: 05/05/41 ABSTRACT: This report compares certain wave theories against actual measurements on a model. The problem was to compare, by means of experimental data, two methods of predicting and to determine if the simple prediction methods employed could be applied to the case of waves traveling over a submarine valley. KEYWORDS: Coastal Processes submarine canyons, wave transformation California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell The Erosional and Depositional History of a Portion of the Coast of Northern California AUTHOR(S): Minard, Claude R., Jr. University of California, Berkeley, Hydraulic Engineering SOURCE: Laboratory, Technical Report No. HEL-2-10, 63 pages DATE: 09/01/64 The sands occurring along the coast of Northern California ABSTRACT: from the mouth of the Russian River to the southeastern end of Drakes Bay contain essentially separate, distinct, assemblages of heavy minerals ("mineralogic provinces"). The main purpose of this report was to present the results of a preliminary investigation of the relationship between these sands and sands which were derived from present and past local sources and which possibly were involved in littoral drift during the past. These results are based upon а consideration of both geomorphologic and mineralogic evidence. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, grain size, littoral sediment, longshore transport, petrology

California, Subregion II, Subregion III, Russian River Cell, Bodega Bay Cell, Point Reyes Cell, S. Point Reyes Reach, Drakes Bay Cell Quaternary Beaches and Coasts between the Russian River and Drakes Bay, California AUTHOR(S): Minard, Claude R., Jr. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Report No. HEL-2-35, 206 pages DATE: 08/01/71 ABSTRACT: The study was made to determine what conditions in the past promoted or inhibited the movement of large quantities of sand down the coast of northern California from the Russian River to Double Point. The influence of erosion and deposition on the sand budget was studied. Modern and ancient wave-cut platforms, sea cliffs, beaches, and coastal dunes were examined in the field and on air photos, and reconnaissance-type maps were drawn of these features. Heavy mineral analyses determined the source of deposits along the coast. Swells from the northwest move sand downcoast from northern California, but there is little net longshore transport west of the San Andreas Fault between the KEYWORDS: Coastal Processes, Geomorphology aerial photography, beaches, cliff sediment, dunes, longshore transport, petrology California, Subregion II, Subregion III, Russian River Cell, Bodega Bay Cell, Point Reyes Cell, S. Point Reyes Reach, Drakes Bay Cell A selected bibliography of Coastal Erosion Protection and Related Human Activity in North America and the British Isles AUTHOR(S): Mitchell, James K. University of Chicago, Department of Geography, Chicago, IL, SOURCE: William and Clark University, Graduate School of Geography, 66 Pages (Working Paper No.4) DATE: 01/01/68 ABSTRACT: This bibliography is largely compiled from articles appearing in semi-specialized periodicals. Appendix I lists 6 of these major sources. Citations are divided into 3 broad categories: 1) physical background to coastal erosion, 2) nature and control of coastal erosion, and 3) human dimensions of coastal erosion. A 2nd Appendix provides some data on legal bases for public policy decisions on questions involving coastal erosion. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics coastal erosion, dunes, geomorphic processes, offshore/onshore transport, sea level change, tides

California, Subregion I, Subregion II, Subregion IV, Subregion V Santa Cruz Harbor Feasibility Study to Mitigate Shoaling in Santa Cruz Entrance Channel (Preliminary draft) AUTHOR(S): Moffatt and Nichol Engineers SOURCE: Moffatt & Nichol Engineers, Long Beach, CA, for USACE, San Francisco District, San Francisco, CA, Contract No. DACW07-77-C-0023 DATE: 02/01/78 ABSTRACT: Preliminary draft report on a study of remedies for the entrance channel shoaling problem at Santa Cruz Harbor. A documentation of the littoral processes contributing to shoaling of the harbor entrance channel. KEYWORDS: Coastal Processes coastal erosion, longshore transport, river sediment discharge, sand entrapment, sedimentation, wave climate California, Subregion IV, Santa Cruz Cell Littoral Processes Study for Santa Cruz Harbor, California AUTHOR(S): Moffatt and Nichol Engineers SOURCE: Moffat and Nichol Engineers, Long Beach, California, for USACE, San Francisco District, San Francisco, CA DATE: 02/01/78 ABSTRACT: This report has 4 sections. Section A defines the purpose and scope of study and provides background. Section B provides a description and history of the harbor and defines the problem. Section C is a detailed analysis of the littoral processes. Section D summarizes the existing and proposed monitoring pro- grams and recommends possible modifications to these programs. References are in Appendix I and calculations are in Appendix 2. KEYWORDS: Coastal Processes beach profiles, longshore transport, river sediment discharge, sand entrapment, sedimentation, wave climate California, Subregion IV, Santa Cruz Cell Santa Cruz Harbor, California, Feasibility Study to Mitigate Shoaling in Santa Cruz Entrance Channel AUTHOR(S): Moffatt and Nichol Engineers SOURCE: Moffatt and Nichol Engineers, Long Beach, CA, for USACE, San Francisco District, San Francisco, CA, Volume 3, 105 pages, 1 plate DATE: 04/01/78 ABSTRACT: This was the third report of a three phase study of remedies for the entrance-channel shoaling problem at Santa Cruz Harbor, California. The purpose

of the study was to develop 15 alterna- tive solutions to mitigate the shoaling problems and keep the harbor entrance channel open. Alternatives were classified into three categories; maintenance, by-passing, and structural. KEYWORDS: Coastal Processes, Socioeconomics beach nourishment/dredging, coastal erosion, coastal structures, longshore transport, sand entrapment, sedimentation California, Subregion IV, Santa Cruz Cell Santa Cruz Harbor Littoral Processes Study AUTHOR(S): Moffatt and Nichol Engineers SOURCE: Moffatt and Nichol Engineers, Long Beach, CA, for USACE, San Francisco District, San Francisco, CA, Volume 2 (unpaged), folding maps, illustrations, tables DATE: 04/01/78 ABSTRACT: This is the second report of a three-phase study concerning remedies for shoaling problems at Santa Cruz Harbor, California. The primary objective of this report was to document the littoral processes which have caused shoaling of the entrance channel. A secondary objective of the report was to recommend modifications to ongoing and proposed monitoring programs. The study was limited primarily to an analysis of existing data. KEYWORDS: Coastal Processes beach profiles, longshore transport, river sediment discharge, sand entrapment, sedimentation, wave climate California, Subregion IV, Santa Cruz Cell Santa Cruz Harbor Shoaling Study; Santa Cruz Harbor, California AUTHOR(S): Moffatt and Nichol Engineers SOURCE: Moffatt and Nichol Engineers, Long Beach, CA, for USACE, San Francisco District, San Francisco, CA, 300 pages, 11 plates, illustration, graphs, photos, tables; includes biblography DATE: 06/01/78 ABSTRACT: This study was conducted to define and document the littoral processes and to develop a cost effective depth maintenance procedure. The study was conducted in 1977 and 1978 in three phases. The first phase developed an interim multi-year dredging program to maintain the channel until a perminent solution could be found. The second phase documented the he littoral processes contributing to shoaling of the harbor entrance channel. The third phase developed and evaluated alternate long-term solutions for mitigating the shoaling and keeping the harbor entrance channel open. KEYWORDS: Coastal Processes, Socioeconomics

beach nourishment/dredging, coastal erosion, coastal structures, longshore transport, sand entrapment, sedimentation California, Subregion IV, Santa Cruz Cell History of Shore Growth from Analysis of Aerial Photographs AUTHOR(S): Moffit, Francis H. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, College of Engineering, 8 pages, illustration, Technical Report HEL-2-21 DATE: 12/01/68 ABSTRACT: This is a description of how to determine a time-history of the position of a shore, using Monterey Bay, California as an example. KEYWORDS: Coastal Processes, Geomorphology aerial photography, shoreline changes California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Computation of Alongshore Energy and Littoral Transport AUTHOR(S): Mogel, T. R.; Street, R. L.; Perry, B. SOURCE: Stanford University, Stanford, CA, Dept. of Civil Engr., Proceeding of the 12th Coastal Engineering Conference, Sept 13-18, 1970, Washington, D.C., Volume 2, ASCE, New York, pages 899-917 DATE: 01/01/70 ABSTRACT: A study was made of the littoral regime of a section of the coastline of the city and county of San Francisco, California. The study included complete refraction analyses of all applic- able deep water wave directions and periods, determination of breaker locations, and computation of alongshore energy and po- tential littoral transport for seven stations located just off- shore along the thirty-foot depth contour. The waves were calculated from deep water locations to the shoreline using the calculated Wave Refraction computer program. Wave breaking is assumed to take place whenever the computed wave height exceeds 0.78 times the local water depth. KEYWORDS: Coastal Processes, Oceanography & Meteorology longshore transport, wave climate, wave transformation California, Subregion III, San Francisco Cell Techniques of Engineering Considerations for Littoral Regime Study, North Coast of California AUTHOR(S): Mogel, T. R.; Street, Robert L. SOURCE: Prepared for USACE, San Francisco District, under contract no. DACW07-73-C-0044, Robert L. Street, Phd. Department of Civil Engineering, Stanford University, Stanford, CA DATE: 03/01/73 ABSTRACT: In 1968 the authors studied the littoral regime of a section of the city and county of San Francisco, California. This study reviewed and updated

the engineering considerations and techniques employed in the software developed for the earlier San Francisco study so that the software could be used on another littoral regime study. KEYWORDS: Coastal Processes longshore transport, wave transformation California, Subregion III, San Francisco Cell Wave Refraction and Littoral Transport Computation AUTHOR(S): Mogel, T. R.; Street, R. L. SOURCE: Stanford University, Stanford, CA, Proceedings of International Symposium on Ocean Wave Measurement and Analysis, Waves '74, New Orleans, LA. ASCE, New York, NY, Volume, 1, pages 790-798 DATE: 09/09/74 ABSTRACT: Hindcast deep-water wave statistics and bottom hydrographic data are combined with a water-wave refraction analysis to estimate the littoral transport in a beach zone. The littoral transport estimation is a two step process. First, a refraction analysis of waves of all periods, heights and directions represented in the hindcast deep-water wave statistics tables is made using a water-wave refraction program. Second, the littoral transport is computed by calculating the alongshore power components of the waves with data obtained from the refraction analysis and utilizing an empirical relationship between these power components and the littoral (sediment) transport. KEYWORDS: Coastal Processes longshore transport, wave climate, wave transformation California Saving the Coast AUTHOR(S): Mogulof, Melvin B. SOURCE: Lexington Books, Lexington, MA, 136 pages DATE: 01/01/75 ABSTRACT: A book concerning the goal and value conflicts over coastal zone control in California and the consequences of Proposition 20. Also discussed are the respective roles of agencies, comissions, governmental actors, and roles of both state and local governments in dealing with coastal policy. KEYWORDS: Socioeconomics institutions/planning/mgmt., population, property value/land use, shoreline use, urbanization California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Point Reyes National Seashore and the San Andreas Fault, CA AUTHOR(S): Molenaar, Dee SOURCE: Wilderness Press, Berkeley, CA, pictorial landform map DATE: 01/01/82

ABSTRACT: Map of Point Reyes and the San Andreas Fault including towns, parks, visitor centers, topographic and shoreline features, steams, roads, and trails. Also includes visitor safety tips. KEYWORDS: Socioeconomics, Survey beaches, maps California, Subregion III, Point Reyes Cell, S. Point Reyes Reach Natural Resources of the Eel River Delta AUTHOR(S): Monroe, Gary M.; Reynolds, Forest California Department of Fish and Game, Sacramento, CA, Coastal SOURCE: Wetlands Series No. 9, 108 pages DATE: 10/01/74 ABSTRACT: This report documented the natural resources of the Eel River Delta, Humboldt County. It outlined and evaluated the problems and conflicts of use that affect those resources and recommended measures to protect and enhance the Delta and its environs. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics dunes, environmental constraints, geology, institutions/planning/mgmt., tides, watersheds California, Subregion I, Eureka Cell Natural Resources of Lake Earl and the Smith River Delta AUTHOR(S): Monroe, Gary M.; Maps, Bobby J.; McLoughlin, Patrick L. SOURCE: California Department of Fish and Game, Sacramento, CA, Coastal Wetland Series No. 10., 113 pages and appendices DATE: 03/01/75 ABSTRACT: The Smith River is one of California's most productive salmon and steelhead streams. Anadromous fish produced here provide thousands of angler use days to sport fishermen and contribute substantially to the commercial fishing catch off the northern coast. This report identifies specific resources and uses; directs attention to problems; and recommends courses of action needed to insure resource protection. It is intended as a guide for citizens, planners, administrators and others interested in the use and development of California's coastal land and waters. KEYWORDS: Geomorphology, Hydrology & Hydraulics, deltas, dunes, environmental constraints, geology, tidal inlets, watersheds California, Subregion I, Smith River Cell Environmental Analysis of the Sediments of Southern Monterey Bay, California AUTHOR(S): Monteath, Gordon M., Jr. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, unpublished thesis, 87 pages

DATE: 01/01/65 ABSTRACT: Thirty-eight bottom sediment samples were collected in southern Monterey Bay; these were analyzed for their textural and con- stituent mineral compositions using coarse fraction analyses. Nine constituents were recognized and their percentage con- centrations in the various size fractions of each sample were estimated. KEYWORDS: Coastal Processes, Geomorphology geology, grain size, littoral sediment, petrology California, Subregion IV, S. Monterey Bay Cell Turbulent Jets and Eddies in the California Current and Inferred Cross-Shore Transports AUTHOR(S): Mooers, Christopher N.; Robinson, Allan R. SOURCE: Science, Washington D.C.: American Association for the Advancement of Science, Volume 223, No. 4631, pages 51-53 DATE: 01/06/84 The instantaneous California current is seen to consist of ABSTRACT: in- tense meandering current filaments (jets) intermingled with syn- opticmesoscale eddies. These quasi-geostrophic jets entrain cold, upwelled coastal waters and rapidly advect them far off- shore; this behavior accounts for the elongated cool surface features that are seen extending across the California current region in satellite infrared imagery. The associated advective mechanism should provide significant cross-shore transport of heat, nutrients, biota, and pollutants. The dynamics of the current system should be influenced by its highly variable structure. KEYWORDS: Oceanography & Meteorology coastal currents, nearshore currents, remote sensing California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Pacific Area Current Charts AUTHOR(S): Mooney, Kenneth A.; Summy, Allan D. SOURCE: U.S. Coast Guard, Washington, D.C., Oceanographic Unit, Report No. TR-82-2, 71 pages DATE: 01/01/82 ABSTRACT: A monthly mean sea current was calculated for the west coast of the United States and the Hawaiian Islands area on a spatial grid of 1 deg by 1 deq. These mean geostrophic velocities were computer generated from dynamic height data obtained from the National Oceanographic Data Center. A method employing

two- dimensional spline fits of spatially and temporally random hydrographic data was developed to determine the monthly averaged geostrophic currents. KEYWORDS: Oceanography & Meteorology climatology, coastal currents California Geologic Investigation and Stability Analysis, Shelter Cove Development, Point Delgada, Humboldt County, CA AUTHOR(S): Moor & Taber SOURCE: Shelter Cove Development Company, Ltd, Shelter Cove, CA DATE: 03/15/66 ABSTRACT: A detailed geologic map based on surface exposures and interpretation of geomorphic features. Contains map base for geological mapping of a scale of 1-inch=200 feet. Date of topographic map is unknown but probably 1964+. Map covers approximately 7,000 feet E-W, and 9,000 feet N-S. Mapped landslide impending on the coastline. Boring logs of drill holes in the slide areas are included. Non-aerial photos of landslide features at coastline. KEYWORDS: Geomorphology geology, geomorphic processes, maps California, Subregion I, Spanish Flat Cell, S. Spanish Flat Reach Sediment Thickness and Physical Properties: Pigeon Point Shelf, California AUTHOR(S): Moore, David B.; Shumivay, George SOURCE: Journal of Geophysical Research, Richmond, VA, Volume 64, No.3 DATE: 03/01/59 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, littoral sediment, sedimentation California, Subregion III, S. Half Moon Bay Reach-A Submarine Slumps AUTHOR(S): Moore, David B. SOURCE: Journal of Sedimentary Petrology, Lawrence, Kansas: Allen Press, Volume 31, No. 3, Pages 343-357, Figures 1-10, graphs DATE: 09/01/61 ABSTRACT: Contemporary submarine slumps have previously been discussed in the geological literature primarily as a mechanism to explain otherwise anomalous topographic or sedimentary features observed on the sea-floor. In contrast, quantitative soil mechanics techniques of measuring the strength properties of sediments are used in this preliminary geological evaluation of some maior marine provinces as source areas of submarine slumps and their consequent

turbidity currents. Direct shear and vane shear tests were made on undisturbed samples from the deep North Pacific, from continental and basin slopes, and from the continental shelf off California. Pre-existing strength data are summarized for comparison. KEYWORDS: Geomorphology geology, petrology, submarine canyons California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Recent Coastal Sediments, Double Point to Point San Pedro California AUTHOR(S): Moore, David B. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Technical Report HEL-2-14, 86 pages DATE: 06/01/65 ABSTRACT: This study examined patterns of longterm sediment movement along a portion of the California Coast, centering around the mouth of San Francisco Bay. Naturally-occurring heavy minerals were used to trace the influence of the several sources of sedi- ments. Surface samples were collected from beaches and from the adjacent portion of the shelf under less than 130 feet of water. The samples obtained were analyzed mechanically and petrographi- cally. Six petrographic provinces were differentiated on the basis of physical and mineralogical properties. KEYWORDS: Coastal Processes, Geomorphology grain size, littoral sediment, longshore transport, California, Subregion III, S. Drakes Bay Reach, Bolinas Bay Cell, San Francisco Cell Geology of the Klamath River Delta, California AUTHOR(S): Moore, G. W.; Silver, E. A. SOURCE: U.S. Geological Survey, Professional Paper 600-C, p. C144-C148 DATE: 01/01/68 Acoustic-reflection profiles show that the submerged deltaic ABSTRACT: sediment of the Klamath River forms a lens-shaped body about 60 m. thick. These deposits are thickest 10 km offshore and 15 km north of the mouth of the Klamath River. A slight doming of the upper surface of the deltaic lens, and transport of sediment generally toward the north as indicated by spits at the mouths of the Klamath and nearby rivers, both suggest that the offset with respect to the river mouth is partly depositional. However, the long axis of the thickest part of the lens coincides with a major syncline in the underlying rocks, indicating

that the position of the deltaic lens probably is, in part, also controlled by recent deformation. KEYWORDS: Geomorphology deltas, geology, longshore transport, neotectonics California, Subregion I, Klamath River Cell Gold Distribution on the Sea Floor off the Klamath Mountains, California AUTHOR(S): Moore, G. W.; Silver, E. A. SOURCE: U.S. Geological Survey, Circular 605, p. 9 DATE: 01/01/68 ABSTRACT: Analyses of 82 samples from the surface of the continental shelf between the Oregon-California border and Eureka, California, indicate that the background gold content on this shelf is about 0.1 ppb (part per billion). Four anomalous tracts, which range in extent from 10 to 30 square kilometers, have gold values above 10 ppb, and the richest sample contains 390 ppb. The anomalous areas seem to lack a close correlation with water depth, but they are related to areas underlain by soft Cenozoic (younger than 65 million vears old) strata that contain small quantities of dispersed gold originally derived from lodes in the Klamath Mountains. This relationship suggests that the offshore gold accumulations are lag concentra-KEYWORDS: Geomorphology geology, grain size, petrology California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell, S. Klamath River Reach, Eureka Cell Monthly Wave Power of Sea and Swell: Station 3, California (off Golden Gate) Lat 37.6 degree N, Long 123.5 degree W. AUTHOR(S): Moore, Jon T.; Orrett, Edwin B. SOURCE: Unpublished, archived at University of California, Berkeley, Water Resources Archives, 1 volume, unpaged, tables DATE: 08/01/71 ABSTRACT: Handwritten computations of monthly wave power of sea and swell, calculated from hindcast wave data as compiled by National Marine Consultants, 1960. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, Subregion III, San Francisco Cell Annual Wave Power: Seven Deep-Water Stations Along the California Coast AUTHOR(S): Moore, Jon T.; Orrett, Edwin B. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, 1 Volume (unpaged), graphs, tables, archived at University of California,

Berkelet, Water Resources Archives DATE: 08/01/71 ABSTRACT: Hand written computations of wave power at 7 deep-water stations along the California Coast including Lat 42.0 N, Long 125.00W (Oregon Border); Lat 39.60N, Long 124.50W (South of Pt. (Delgada); and Lat 37.6 N, Long 123.50 W(Waters off San Francisco). KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, Subregion I, Subregion II, Subregion IV, Subregion V Refraction Diagrams for Bolinas Bay, Drakes Bay, Bodega Bay AUTHOR(S): Moore, Jon T.; Orrett, Edwin B. Unpublished, handwritten manuscript, archived at University of SOURCE: California, Berkeley, Water Resources Archives, 1 volume, unpaged, tables, diagrams DATE: 09/01/71 ABSTRACT: Handwritten calculations of refraction coefficients and hand drawn refraction diagrams for the three locations. KEYWORDS: Coastal Processes wave transformation California, Subregion II, Subregion III, Bodega Bay Cell, Drakes Bay Cell, Bolinas Bay Cell A Case History of Santa Cruz Harbor, California AUTHOR(S): Moore, Jon T. University of California, Berkeley, College of Engineering, SOURCE: Hydraulic Engineering Laboratory, Report HEL-24-14, Water Resource Abstracts (059367 W73-11092) DATE: 06/01/72 ABSTRACT: Santa Cruz Harbor is a small craft harbor located about 80 miles south of San Francisco, California. The harbor was completed in 1964 to meet the needs of a growing demand for boat slips and provide shelter from storms. The entrance channel to the harbor has since experienced severe shoaling problems that have greatly reduced the intended year-round use of the facilities. The Santa Cruz harbor project and maintenance problems that have developed since construction are reviewed. After completion of the jetties in May 1963, approximately 600,000 cubic yards of sand accumulated on the upcoast beach in a 2-year period. From 1965 to 1971 the shoaling became increasingly severe. The KEYWORDS: Coastal Processes

coastal structures, longshore transport, sedimentation, shoreline changes, wave transformation California, Subregion IV, Santa Cruz Cell Emergency Protection of Eroding Shores AUTHOR(S): Moore, Jon T. SOURCE: Coastal Zone 78, Symposium on Technical, Enviromental, Socioeconomic and Regulatory Aspects of Coastal Zone Management, ASCE, New York, NY DATE: 03/16/78 This paper briefly discusses erosion protection on an emer-ABSTRACT: gency basis and suggest that contingency planning for future events may be a prudent policy. The issue is multi-discipli- nary, as implementation of such a program requires appraisal of the benefit-costs and environmental consequences, and regulatory decisions concerning the balance of shared responsibility. KEYWORDS: Coastal Processes, Socioeconomics coastal erosion problems, coastal structures, institutions/planning/mgmt., shore protection California, Subregion III, Subregion IV, Bolinas Bay Cell, Santa Cruz Cell Preliminary Report on Beach Survey of Point Reyes, California Determined from Aerial Photographs AUTHOR(S): Morey, B. SOURCE: University of California, Berkeley, College of Engineering, Fluid Mechanics Laboratory, 2 pages, folding plates, HE-116-32 DATE: 11/29/44 ABSTRACT: Discusses the beach survey of bottom topography at an observa- tion station at Point Reyes, California. Aerial photographs were utilized. KEYWORDS: Coastal Processes, Survey aerial photography, beaches, beach profiles California, Subregion II, Subregion III, Point Reyes Cell, S. Point Reyes Reach, Drakes Bay Cell A Descriptive Survey of the Head of the Carmel Submarine Canyon AUTHOR(S): Moritz, Carl A. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 80 pages DATE: 12/01/68 ABSTRACT: Scuba dive observations made in Carmel Submarine Canyon revealed the existence of rock outcrops of granodiorite on both sides of the canyon head. Five distinct bottom types were found: rock outcrops and boulders, coarse sand,

fine sand containing benthic organisms, a silty clay layer underlying coarse sand, and an organic sediment mat. Rocky bottomed terraces on both sides of the canyon head are at the same level and appear to have been eroded at a previously lowered sea level. The coarse sand areas characterized by steep slopes, are considered to be areas of active sand movements. The fine sand bottoms were found to be relatively stationary, although dead kelp material moves over its surface. Thin silty clay deposits considered to be of KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, sedimentation, submarine canyons California, Subregion IV, S. Monterey Bay Cell Monterey Bay Bibliography AUTHOR(S): Moss Landing Marine Laboratories Moss Landing Marine Laboratories, Moss Landing, CA, Technical SOURCE: Publication 71-1, 259 pages, Water Resources Abstracts (069908 W74-04218) DATE: 01/01/71 ABSTRACT: A partial, provisional bibliography is presented of scientific and general papers, reports, books, and miscellaneous publica- tions which deal directly or indirectly with the Central Cali- fornia Coast. Subject headings include Geology, Physical Geo- graphy, Oceanography, Meteorology, Coastal Engineering, Boats and Boating, Materials and their Protection, Description and Travel, Geography, History, Recreation, Marine Biology, and Fisheries and Fish Culture. Cross reference notes are included. The author index is arranged alphabetically giving date of publication and citation number which identifies the entry in the bibliography. A general index is provided with topics KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics beaches, climatology, coastal structures, geology, shoreline changes, shoreline use California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Monterey Bay Bibliography, Supplement Number One AUTHOR(S): Moss Landing Marine Laboratories SOURCE: Moss Landing Marine Laboratories, Moss Landing, California, Technical Publication 72-8, 103 pages, Water Resources Abstracts (068897 W74-04219) DATE: 01/01/72 ABSTRACT: This is a supplement to the "Monterey Bay bibliography" and is presented in the same format. Cross reference notes are included. The author index is arranged alphabetically giving date of publication and citation number

which identifies the entry in the bibliography. A general index is provided with topics listed alphabetically followed by their subject headings. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics beaches, climatology, coastal structures, geology, shoreline changes, shoreline use California, Subregion IV, Santa Cruz Cell, Geology and Ground Water of the Pajaro Valley Area, Santa Cruz, and Monterey Counties, California AUTHOR(S): Muir, K. S. SOURCE: U.S. Geological Survey, Department of the Interior, Water Resources Division, 33 pages (4022-02) DATE: 06/27/72 Purpose of study was to develop plans to insure sufficient ABSTRACT: water for future needs of the counties. Hydrologic conditions were studied and a description of the geologic framework and ground- water resources are qiven. general description of the geologic units and a 1:62,500 scale black and white geologic map, without bedding altitudes, is included. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics environmental constraints, geology, institutions/planning/mgmt., maps, population California, Subregion IV, Santa Cruz Cell The California State Coastal Conservancy: A Guide for Planners AUTHOR(S): Muretta, Peri A. SOURCE: University of Southern California, Los Angeles, CA, Institute for Marine and Coastal Studies, Sea Grant Marine Advisory Services, 30 pages (USCSG-A501-82) DATE: 01/01/82 ABSTRACT: A description of the authority of the California State Coastal Conservancy. Items discussed include acquisition of land and development to enhance or restore coastal resources. KEYWORDS: Socioeconomics institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Monterey Submarine Canyon, Benthic Survey AUTHOR(S): Mybakken, James; Broenkow, William SOURCE: USACE, San Francisco District, San Francisco, CA; by Moss landing Marine Laboratories, Moss Landing, California, 1983 DATE: 05/01/83 ABSTRACT: This was a one-time only study undertaken to obtain baseline data on

the benthic environment at a proposed dredged spoils dump site (SF-14) in the Monterey Canyon about two miles west of Moss Landing. The proposed dump site had a center point at 36 degrees 47'53" N latitude and 121 degrees 49'04" W longitude and encompassed a circle of 500 yards in radius. The approximate depth in this area was 100 fathoms (600 ft, 180 m). KEYWORDS: Geomorphology, Oceanography & Meteorology, Survey environmental constraints, grain size, hydrographic surveys, submarine canyons California, Subregion IV, S. Monterey Bay Cell Damages in San Mateo County, California, from the Earthquake of 18 April 1906 AUTHOR(S): Nason, R. SOURCE: U.S. Geological Survey, Open-File Report 80-176, p. 52 DATE: 01/01/80 ABSTRACT: The San Mateo County area was greatly affected by the earthquake of 18 April 1906. This report compiles the 1906 earthquake damages in San Mateo County. The damages have been organized and listed by locality. Five landslides along the coast of northern San Mateo County triggered by the 1906 earthquake are described. KEYWORDS: Geomorphology coastal erosion, geomorphic processes, neotectonics California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell, S. Half Moon Bay Reach-A Summary of Synoptic Meteorological Observations, North American Coastal Marine Areas Revised, Pacific Coast, Volume 6 AUTHOR(S): National Climatic Center U.S. Naval Weather Service Command-Volume 6 Area 36 Point SOURCE: Arena, area 37-Eureka, Area 38-Cape Blanco, Area 39-Newport, Area 40- Astoria, Area 41 -Vancouver Island SW., 483 pages DATE: 05/01/76 ABSTRACT: The report presents marine climatological data for specific coastal areas in 21 different tables including weather occurrence, wind direction and speed, cloud amount, ceiling height, visibility, precipitation, relative humidity, air-sea temperature difference, sea height and period, sea surface temperature and sea level pressure. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, precipitation, wave climate, wind California, Subregion I, Subregion II, Eureka Cell, Navarro River Cell

Summary of Synoptic Meteorological Observations, North American Coastal Marine

Areas - Revised, Pacific Coast, Volume 5 AUTHOR(S): National Climatic Center SOURCE: U.S. Naval Weather Service Command. Volume 5, Area-30-Baja, area 31-San Diego, 200 SW, Area 32-San Diego, Area 33-Santa Rosa Island SW, Area 34-Point Mugu NW, Area 35-San Francisco, 484 P. DATE: 05/01/76 ABSTRACT: The report presents marine climatological data for specific coastal area in 21 different tables including weather occurrence, wind direction and speed, cloud amount, ceiling height, visibility, precipitation, dry bulb, relative humidity, air-sea temperature difference, sea height and period, sea surface temperature and sea level pressure. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, precipitation, wave climate, wind California, Subregion III, San Francisco Cell, S. San Francisco Reach Climatic Study of the Near Coastal Zone, West Coast of the United States. AUTHOR(S): National Climatic Center National Climatic Center, Asheville, North Carolina, 137 pages SOURCE: DATE: 06/01/76 ABSTRACT: This report presents marine climatological data for the near coastal zone of the West Coast of the United States. Graphic presentations of the percent frequency of visibility, ceiling and wave heights are provided for each one-degree square. Surface wind and surface current roses are presented for each one-degree square. The report covers (34-49 deg N, Coast-130 deg W). Isopleth analyses are presented for ceiling, visibility, wind speed, air and sea temperature and wave height. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, coastal currents, nearshore currents, wave climate, wind California, Oregon, Subregion I, Subregion II, Coastal Data Networks and Sources AUTHOR(S): National Climatic Center; Quayle, Robert G. SOURCE: US National Oceanic and Atmospheric Administration, Silver Springs, MD, Department of Commerce, 32 pages DATE: 09/01/79 ABSTRACT: Summary and evaluation of data sources that may be used to establish a complete, coastal data base. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, coastal currents, coastal erosion, tides, wave climate, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V

Climate Summaries for NDBC Data Buoys AUTHOR(S): National Climatic Center

National Data Buoy Center, National Oceanic and Atmospheric SOURCE: Administration, NSTL, MS; Prepared by National Climatic Data Center DATE: 04/01/86 ABSTRACT: This publication summarizes environmental information collected at buoy stations in the North Atlantic, North Pacific and Gulf of Mexico. Elements summarized include wind direction, speed, and qust, sea level pressure, air temperature, significant wave height, and average as well as dominant wave period for buoys with approximately six years of data. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, wave climate, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Wave Statistics for the Ten Most Severe Storms Affecting Three Selected Stations Off the Coast of Northern California, during the Period 1951-1960 AUTHOR(S): National Marine Consultants Inc. SOURCE: USACE, San Francisco District, San Francisco, CA, 16 pages DATE: 12/01/60 ABSTRACT: A report on storm wave statistics describing the meteorological factors producing storm waves off the Pacific Coast, how the data was gathered, and actual hindcast storm wave statistics for the period 1951-1960. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, storm waves, wave climate, wind California, Subregion I, Subregion II, Subregion III Wave Statistics for Seven DEEP Water Stations Along the Cali- fornia Coast AUTHOR(S): National Marine Consultants Inc. SOURCE: USACE, San Francisco and Los Angeles Districts, CA, 20 Pages and figures DATE: 12/01/60 ABSTRACT: The statistics compiled include: wave height, wave direction, and wave period and are presented as monthly and annual averages based on hindcasts from meterological records and charts for the years 1956, 1957, and 1958. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology, storm waves, wave climate, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Wind Stress and Wind Stress Curl Over the California Current AUTHOR(S): Nelson, Craig S. SOURCE: U.S. National Oceanic and Atmospheric Administration, U.S. Department of Commerce, National Marine Fisheries Services, NOAA Technical Report NMFS SSRF-714, 87 pages, diagrams DATE: 08/01/77

ABSTRACT: Historical surface marine wind observations are summarized by 1degree square areas and months to describe the seasonal distri- bution of wind stress over the California Current. Off the coasts of Southern California and Baja, California, an along- shore equatorward component of surface wind stress is present throughout the year. The distributions of wind stress north of Cape Mendocino are characterized by marked changes in direction and magnitude between summer and winter. The predominant wind stress maximum shifts northward coherently from off Point Con- ception in March to south of Cape Blanco in September, and extends approximately 500 km in the offshore direction and 1,000 KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Upper Russian River Gravel and Erosion Study AUTHOR(S): Newmarch, George; Mitchell, Louis R.; Padjen, Mike; Herbst, Charlene. SOURCE: California Department of Water Resources, Sacramento, CA, 93 pages DATE: 05/01/84 ABSTRACT: Report presenting the results of the Upper Russian River gravel and erosion study. Goal was to understand the impacts of gravel mining on water resources in the Upper Russian River watershed. Also provides data on fish. wildlife, groundwater, surface water farmland, riparian vegetation, and channel and bank erosion. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics geology, grain size, institutions/planning/mgmt., mining, river sediment discharge, sedimentation California, Subregion II, Russian River Cell Great Highway - Ocean Beach Coastal Engineering Report Seawall Design AUTHOR(S): Noble Coastal and Harbor Engineering Limited SOURCE: Prepared for Clean Water Program, City and County of San Francisco, California, July 9, 1985 DATE: 07/09/85 Report Covers: 1-Physical conditions at ocean beach including ABSTRACT: tides, waves, wind, sediment transport, and beach conditions. 2-Model tests used to develop a seawall configuration. 3-Structural configuration to best project area. 4-Design criteria looking at physical forces on the seawall. 5-Recommends alternative 3, an angled seawall to direct flow back to the sea.

KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology beaches, coastal erosion, coastal structures, California, Subregion III, San Francisco Cell Meteorological, Water-Temperature, and Discharge Data for the Mattole River Basin, Humboldt County, California AUTHOR(S): Noble, R. D.; Jackman, A. P. SOURCE: U.S. Geological Survey, Water-Resources Investigation 78-81, p. 93 DATE: 01/01/83 Synoptic meteorological, water-temperature, and discharge ABSTRACT: data were obtained in the Mattole River basin in northern California during the period June 10 through August 31, 1975. The variables monitored were water temperature and discharge, wind velocity, air temperature, solar radiation, water velocity, and axial dispersion coefficients. River-temperature models can be tested from this detailed set of data. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology climatology, river discharge, stream gaging, wind California, Subregion I, Mattole River Cell Shoreline Changes Humboldt Bay, California AUTHOR(S): Noble, Ronald M. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, College of Engineering, 36 pages (HEL-24-2) DATE: 02/01/71 ABSTRACT: Discussion of shoreline changes of the Humboldt entrance from the time that it was an unimproved tidal inlet, 1858, through the years of modification to the entrance. Includes maps and diagrams. KEYWORDS: Coastal Processes coastal structures, littoral sediment, nearshore currents, shoreline changes, tidal inlets, wave transformation California, Subregion I, Eureka Cell Shoreline Changes, Humboldt Bay, California AUTHOR(S): Noble, Ronald M. SOURCE: Shore and Beach, Journal of American Shore & Beach Preservation Association, O'Brien Hall, University of California, Berkeley, CA DATE: 10/01/71 ABSTRACT: A history of the shoreline changes in the vicinity of the Humboldt Bay entrance is presented. The bay is described, and the details of its wave conditions, winds, currents, and tides are presented. KEYWORDS: Coastal Processes coastal structures, littoral sediment, nearshore currents, shoreline changes, tidal inlets, wave transformation California, Subregion I, Eureka Cell

Deterministic and Probabilistic Design Wave Approach to Engi- neering Application AUTHOR(S): Noble, Ronald M.; Dornhelm, Richard B. SOURCE: International Symposium on Ocean Wave Measurement and Analysis, Waves '74, New Orleans, September 1974, Proceedings, American Society of Civil Engineers, New York, NY, Pages 856-866 DATE: 09/01/74 ABSTRACT: The design of nuclear power plants requires the evaluation of the ability of safety-related structures, systems, & components to withstand the consequences of natural hazards of the probable maximum event. This requires a deterministic type of design approach. For facilities not requiring this severe of a design, historical oceanographical data is used in order to base design requirements of the project on an acceptable return storm. This approach is based on the probability of the design storm occurring in any one year. Also the annual oceanographical conditions can be evaluated as they relate to the construction KEYWORDS: Coastal Processes, Oceanography & Meteorology storm waves, wave climate California, Subregion I, Subregion II, Subregion IV, Subregion V Stream-Channel Response to the January 3-5, 1982, Storm in the Santa Cruz Mountains, West-Central California AUTHOR(S): Nolan, K. M.; Marron, D. C.; Collins, L. M. SOURCE: U.S. Geological Survey, Open-File Report 84-248, p. 56 DATE: 01/01/83 ABSTRACT: Intense rainfall on January 3-5, 1981, in the Santa Cruz Mountains caused high streamflow and widespread landsliding. Recurrence intervals for maximum rainfall intensities were in excess of 100 years. This report assesssed the effects of high streamflow on streamchannel geometry and sediment transport in three drainage basins within the steep terrain of the Santa Cruz Mountains and related effects to hillslope processes operating during the storm. Data presented were collected from sites of previously established streamgaging stations as well as from postflood field investigations. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology geomorphic processes, precipitation, river discharge, river sediment discharge, stream gaging

California, Subregion IV, Santa Cruz Cell Northern California Aggregates, Jenner Hearings, 1970 AUTHOR(S): Northern California Aggregates Company SOURCE: 1 volume (unpaged), illustrations, available at University of California, Berkeley, Water Resources Archives DATE: 01/01/70 ABSTRACT: Northern California Aggregates, Jenner Hearings includes clippings, correspondence, and miscellaneous data on the gravel extraction from the mouth of the Russian River. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics environmental constraints, institutions/planning/mgmt., mining, river-bed sediment California, Subregion II, Russian River Cell Tides and Bottom Currents Off the Coast of Northern California AUTHOR(S): Nowroozi, Ali A. Limnology and Oceanography, Lawrence, Kansas: Allen Press, SOURCE: 15(4), pages 615-624, July 1970, Oceanic Abstracts, (71-00635 71-1B-00130) DATE: 07/01/70 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology coastal currents, tides California, Subregion I, Subregion II, Subregion III Long-Term Measurements of Pelagic Tidal Height off the Coast of Northern California AUTHOR(S): Nowroozi, Ali A. SOURCE: Journal of Geophysical Research, Richmond, VA, 77(3): pages 434-443, January 20, 1972, Oceanic Abstracts, Bethesda, MD, (72-02324) DATE: 01/20/72 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology sea level change, tides California, Subregion I, Subregion II, Subregion III A Report on Sand Movement and Beach Erosion Along the Pacific Coast of the United States. (Report made to the) Beach Erosion Board, Washington, DC AUTHOR(S): O'Brien, Morrough P. SOURCE: 3 volumes (photocopied), maps, diagrams, tables, graphs, available at the University of California, Berkeley, Water Resources Archives DATE: 01/01/30 ABSTRACT: This report on sand movement and beach erosion at various beaches and tidal inlets along the Pacific Coast is based on an inspection made during June, July and August of 1930 and upon subsequent studies. Contents of the three volumes are as follows: Part 1, Section 1 - General data and conclusions,

Section 2 - model tests; Part 2 - Beaches (California) includes Halfmoon Bay and Monterey Bay; Part 3 - Tidal inlets (includes Humboldt Bay). KEYWORDS: Coastal Processes, Survey beaches, coastal erosion, longshore transport, offshore/onshore transport, shore protection, tidal inlets California, Subregion I, Subregion III, Subregion IV, Eureka Cell, Half Moon Bay Cell, Santa Cruz Cell, S. Monterey Bay Cell Beach Erosion Pacific Coast: San Francisco Entrance and Adjacent Beaches AUTHOR(S): O'Brien, Morrough P. SOURCE: Unpublished, 1 vol (unpaged), photos, available at the University of California, Berkeley, Water Resources Archives DATE: 01/01/32 ABSTRACT: Photographs and hand written descriptions of beach erosion at certain locations on the California coast. Some newspaper clippings are included. Study covers 1930-1932. KEYWORDS: Coastal Processes, Survey coastal erosion California, Subregion II, Subregion III, Subregion IV, San Francisco Cell, Carmel River Cell Wave Refraction Near the Monterey Breakwater. AUTHOR(S): O'Brien, Morrough P. SOURCE: University of California, Berkeley, College of Engineering, 2 leaves, HE-116-5 DATE: 08/19/44 ABSTRACT: The object of this paper was to check predicted variations in wave height in a refractive area and to obtain information on the internal flow of wave energy during diffraction around a nearly vertical wall. It outlines the program and method to achieve the objective. KEYWORDS: Coastal Processes wave climate, wave transformation California, Subregion IV, S. Monterey Bay Cell Operations at Monterey Bay, California AUTHOR(S): O'Brien, Morrough P.; Wiegel, Robert L. SOURCE: University of California, Berkeley, Department of Engineering, 13 leaves, illustrations, IER series 29, Issue 23, photos DATE: 06/01/50 ABSTRACT: The primary objective of this project was to discover the effect of a steep beach face on the behavior of the amphibious test craft. At the same time information was gained on the trafficability of nearby beaches; accuracy of

forecasts; and on the efficiency and accuracy of aerial intelligence in regard to the oceanographic factors affecting amphibious landings. KEYWORDS: Coastal Processes, Survey aerial photography, beaches, beach profiles, wave climate, wave transformation California, Subregion IV, S. Monterey Bay Cell Notes on Tidal Inlets on Sandy Shores AUTHOR(S): O'Brien, Morrough P. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Report No: HEL-24-5, 52 pages DATE: 05/01/71 ABSTRACT: These various unpublished memoranda were reproduced because of their value to the Coastal Engineering Research Center's inlet research program. The notes include data concerning equilibrium flow area, elements of the hydraulic regimen, energy dissipation in a tidal basin, power available for maintenance of flow area, value of tidal prism in maintaining interior channels, stable channels and stable inlets, velocity at the throat of a tidal inlet, friction slope at throat section, duration of tide, tide wave entering a wide deep inlet, set-up in a lagoon by wave action, wave refraction by currents at an inlet, and inlets as traps for littoral currents. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, estuarine sediment storage, nearshore currents, sand entrapment, sedimentation, tidal inlets, wave transformation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Short-Term Sea-Level Anomalies at Monterey, California AUTHOR(S): O'Connor, Paul SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 56 leaves, charts, tables DATE: 01/01/64 ABSTRACT: It was the purpose of the paper to determine the nature and magnitude of irregular sea-level variations of relatively short duration occurring at Monterey, California and to determine their causes. A method was devised to detect and measure variations having durations in the range from a few hours to a few days, and these anomalies are dealt with exclusively. KEYWORDS: Coastal Processes, Oceanography & Meteorology sea level change, storm surge, tides, wave climate California, Subregion IV, S. Monterey Bay Cell Geology of the California Coast Ranges AUTHOR(S): Oakeshott, Gordon B.

SOURCE: California Department of Conservation, The Resources Agency, Division of Mines and Geology, Sacramento, CA, Mineral Information Service, Vol. 23, Number 1, Jan 1970, pages 7-10 DATE: 01/01/70 ABSTRACT: This is a description of the geology of the California coast ranges; how they were formed; what they are composed of, and where the fault zones are located KEYWORDS: Geomorphology geology, geomorphic processes, petrology California, Subregion I, Subregion II, Subregion IV, Subregion V Oceanographic Resources of the Pacific Northwest AUTHOR(S): Oceanography Study Committee SOURCE: University of Washington Press, Seattle, WA, 122 pages plus appendix DATE: 01/01/67 ABSTRACT: An inventory of the region's oceanographic resources, including coastal engineering, marine resource facitities, commerical resources etc.. KEYWORDS: Oceanography & Meteorology, Socioeconomics coastal structures, institutions/planning/mgmt., shoreline use California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell, S. Klamath River Reach, Eureka Cell Geology of Eel River Valley Area, Humboldt County, California AUTHOR(S): Ogle, Burdette A. SOURCE: California Department of Natural Resources, Division of Mines & Geology, Sacramento, CA, 128 pages and maps, Its Bulletin 164 DATE: 11/01/53 The oldest formational unit is the Franciscan formation ABSTRACT: (Upper Jurassie), which consists of graywacke and shale, and a minor amount of greenstone basalt, chert, and glaucophane schist. The Franciscan is in fault contact with the Yager formation. Well- indurated dark-gray mudstone, shale. and biotite-rich graywacke are the principal rock types of the Yager formation. A strong angular unconformity separates the Yager and Franciscan from the Wildcat group. Clastic sediments of the Wildcat are more than 12,000 feet thick in the Eel River-Van Duzen River area. KEYWORDS: Geomorphology geology, geomorphic processes, petrology California, Subregion I, Eureka Cell Ocean Beach Study: Survey of Historic Maps and Photographs AUTHOR(S): Olmsted, Roger; Olmsted, Nancy SOURCE: San Francisco Wastewater Management Program, San Francisco, CA, 41

pages, maps, photos DATE: 02/23/79 ABSTRACT: This study of Ocean Beach brought together a collection of Coast Survey Charts from 1852 to 1929 for analysis as to changes along San Francisco's Ocean Beach. Photographs are used as supplementary evidence. These maps (both the manuscript and the published charts) and photographs were supplemented further by numerous engineering drawings of the improvements which are on file in the Engineering Department of the San Francisco Public Works Department. Particular attention was given to any evidence of trends or patterns of response in the line of the Ocean Beach shoreline to man-made improvements, especially with regard to erosion. KEYWORDS: Coastal Processes, Geomorphology, Survey aerial photography, coastal structures, maps, shoreline changes, shoreline use California, Subregion III, San Francisco Cell Sediment Budget for Monterey Bay AUTHOR(S): Oradiwe, Emmanuel N. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 102 pages DATE: 03/01/86 ABSTRACT: A sediment budget analysis based on the principle of mass conservation is performed for Monterey Bay. The various littoral processes in the Bay are evaluated quantitatively. The results indicate that about 2.1 million cubic yards of sand are deposited annually into the Bay, which is treated as a quasi- closed system. Deposition from cliff erosion, computed from the cliffs' profile changes, amounted to 560,000 cubic yards, and accounted for 27% of the total deposit. River discharges were extrapolated using a power law formula; the total yield was 1.1 million cubic yards, representing 54% of the entire sediment deposition. The potential longshore drift was evaluated using an 18 years spectral wave climatology; its contribution was KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics, Survey cliff sediment, coastal erosion, longshore transport, offshore/onshore transport, river sediment discharge, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Technical Conference on Estuaries of the Pacific Northwest, Corvallis, Proceeding 1971 AUTHOR(S): Oregon State University at Corvallis SOURCE: Oregon State University, Corvallis, Oregon, Department of

Oceanographic Engineering, Experiment Station, Circular No. 42 Volume I, 343 Pages DATE: 01/01/71 ABSTRACT: Compiled papers on estuaries of the Pacific Northwest including: Callaway, "Applications of Numerical Models to Pacific North- west Estuaries"; Bella, "Mathematical Model of Estuarine Benthal Systems; Grubbe, Legal Protection of the Pacific Northwest Estuaries."; Locccent "Historical changes of Estuaries Topography with questions on future management Policies"; Dillon. "Recent Federal Policies affecting Marine Science and Engineering Developments." KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., remote sensing, shoreline use, tidal inlets California, Oregon, Subregion III, Bolinas Bay Cell, San Francisco Cell Oceanography of the Nearshore Coastal Waters of the Pacific Northwest Relating to Possible Pollution AUTHOR(S): Oregon State University at Corvallis SOURCE: U.S. Environmental Protection Agency, Water Quality Office, Water pollution control research series, 16070 EOK 07/71, 2 Volumes, maps, tables DATE: 07/01/71 ABSTRACT: This study was limited to the coastal zone of the Pacific Northwest from high tide to ten kilometers from shore, and does not include estuaries and bays. Includes chapters on geology, hydrology, winds, temperature and salinity, heat budget, waves, coastal currents, carbon dioxide and pH, oxygen, nutrients, and biology. Also chapters dealing with field studies on thermal discharges, heat dispersion models, pulp and paper industrial wastes, trace metals, radiochemistry, pesticides and chlorine, thermal ecology and biology of 20 selected species. A summary chapter is entitled "The Nearshore Coastal Ecosystem: KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology climatology, coastal currents, geology, river discharge, wave climate, wind California, Oregon, Subregion I, S. Smith River Reach, Klamath River Cell, S. Klamath River Reach, Eureka Cell, S. Eureka Reach Second Annual Technical Conference on Estuaries of the Pacific Northwest, Proceedings, Corvallis 1972 AUTHOR(S): Oregon State University at Corvallis SOURCE: Oregon State University, Corvallis, Oregon, Department of Oceanography, Engineering Experiment Station, Volume II, 111 Pages

DATE: 03/16/72 ABSTRACT: Compiled papers on Estuaries of the Pacific Northwest including: Herndon "The National Shoreline Study"; Carstens, "Physical Modeling of Residence Times in Tidal Basins; "Richey, "State of the Art of Floating Breakwaters"; Ternyik, "Pacific Northwest Coastal Zone Management as it relates to Estuary Protection". KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., shoreline use, shore protection, tidal inlets California, Oregon 3rd Annual Technical Conference on Estuaries of the Pacific Northwest, Corvallis, Proceedings 1973 AUTHOR(S): Oregon State University at Corvallis SOURCE: Oregon State University, Corvallis, Oregon, Department of Oceanography Engineering Experment Station, Circular No. 46., Volume III, 111 Pages DATE: 03/15/73 ABSTRACT: Compiled papers on estuaries of the Pacific Northwest including: Lowe "Congress on the Horizon for effective Coastal Zone Manage- ment"; Johnson, "Comprehensive Planning for the Coastal Zone"; Klingeman, "General Planning Methodology for Estuarine Natural Resources"; Bendiner, "3-D Measurement of Estuarine Circulation using a Tracer Dye." KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics environmental constraints, institutions/planning/mgmt., nearshore currents, shoreline use, California, Oregon Fourth Annual Technical Conference on Estuaries of the Pacific Northwest, Corvallis, Proceedings 1974 AUTHOR(S): Oregon State University at Corvallis SOURCE: Oregon State University, Corvallis, Oregon, Department of Oceanography Engineering Experiment Station, Circular No. 50, Volume IV, 78 Pages DATE: 03/14/74 ABSTRACT: Compiled papers on estuaries of the Pacific Northwest including: Laroe, "Coastal Zone Management Legislation as seen from the Washington D.C. Perspective"; Benner, "Why not classify estuaries"; Cutshau, " Meals in Estuaries"; Specht, "The Use of Standardized Marine Algal Bioassays for Nutrient Assessment of Oregon Coastal Estuaries"; Herzog, "Digital Processing of Erts Satellite Data for Management of Estuarine and Land Resources"; Goodnyn," Physical parameters which control propagation of tidal waves in Estuaries";

Young"inputs and distributions of chlorinated hydro-drogons in three Southern California Harbors"; KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics environmental constraints, institutions/planning/mgmt., remote sensing, shoreline use, tidal inlets, tides California, Oregon Public Use of Coastal Beaches AUTHOR(S): Owens, David W.; Brower, David J. SOURCE: North Carolina, University of Raleigh, National Sea Grant College Program, Rockville, Maryland, Sea Grant Publication UNC-SG-76-08, 365 pages DATE: 09/01/76 ABSTRACT: The question of "beach access" and potential resolutions to the issues it raises are examined in this report. First, methods for firmly establishing public rights that already exist in the beach resource are explored. Next, means of acquiring new rights which permit the public to make use of the beach are examined. Terminology is classified, court cases and legislat- ive proposals are discussed. KEYWORDS: Socioeconomics growth potential/recreation, institutions/planning/mgmt., property value/land use, shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V Oceanographic Survey, Bodega Bay; 1960-1964 AUTHOR(S): Pacific Gas and Electric Company SOURCE: In-house Report by Pacific Gas and Electric, San Francisco, CA, unpublished DATE: 01/01/64 ABSTRACT: Not Reviewed. KEYWORDS: Oceanography & Meteorology, Survey maps, tidal inlets California, Subregion II, Bodega Bay Cell Index of Reports and Maps of Floods, California AUTHOR(S): Pacific Southwest Inter-Agency Committee SOURCE: Pacific Southwest Inter-Agency Committee Report of the Water and Vegetation Management Technical Subcommittee. Unpaged, available at Univ. of CA, Berkeley, Water Resources Archives DATE: 01/01/78 ABSTRACT: This report is one of three which are indexes of maps and information related to floods and inundated areas in the Pacific Southwest. This report concerns California. KEYWORDS: Hydrology & Hydraulics maps, river discharge, storms/floods, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V

Geology and Former Shoreline Features of the San Mateo 7.5 Minute Quadrangle, San Mateo, California AUTHOR(S): Pampeyan, Earl H. SOURCE: U.S. Geological Survey, Department of Interior, 12 leaves and 2 folding maps; Open-File Report 81-839 DATE: 01/01/81 ABSTRACT: This is a geologic map of the San Mateo 7.5 minute quandrangle. There is a description of map units, reliability diagram, and correlation of map units. KEYWORDS: Geomorphology, Survey geology, geomorphic processes, maps California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell Southwest Ocean Outfall: City and County of San Francisco Waste Water Management Program, Predesign Oceanographic Study Report AUTHOR(S): Parsons Brinkerhoff Parsons Brinkerhoff, San Francisco, 627 pages in various SOURCE: pagings, illustrations, graphs, tables; includes bibliography DATE: 11/20/78 ABSTRACT: Oceanographic study by the city and county of San Francisco includes marine geophysical investigation, current measurement program, plume behavior study, and bacterial die-off rate study. KEYWORDS: Oceanography & Meteorology, Socioeconomics coastal currents, coastal structures, nearshore currents, offshore/onshore transport, shoreline use, urbanization California, Subregion III, Bolinas Bay Cell, San Francisco Cell Comparisons of Beach Elevations at Limits of Backrush and Uprush with USC & GS Tide Predictions on Several Pacific Ocean Beaches AUTHOR(S): Patrick, D. A. University of California, Berkeley, Institute of Engieering SOURCE: Research, Technical report #155 - 36, 5 pages and figures, Its series 29, Issue #36 DATE: 10/01/50 This report presents data from field measurements and ABSTRACT: attempts to correlate them with the tide predictions on general Pacific Ocean beaches. Establishing a datum plane for elevations is important for studies in amphibious oceanography. Such a plane can be used as a basis of reckoning for hydrographic surveys, offshore depth determination and beach reconnaissance from aerial photographs, beach erosion studies, wave and surf predictions, and UDT

reconnaissance reports. Tide predictions are published by the U.S. Coast and Geodetic Survey for 150 reference ports throughout the world along with tidal KEYWORDS: Coastal Processes bench marks, sea level change, tides California, Subregion II, Subregion III, Subregion IV, Point Reyes Cell, S. Point Reyes Reach, S. Monterey Bay Cell Floods of 1950 in Southwestern Oregon and Northwestern California AUTHOR(S): Paulsen, C. G. SOURCE: U.S. Geological Survey Water-Supply Paper 1137-E, U.S. Government Printing Office, Washington, D.C. DATE: 01/01/53 A presentation of data on the floods of October - November ABSTRACT: 1950, on the Smith, Klamath, Mad and Eel River Basins in Northwestern California. KEYWORDS: Hydrology & Hydraulics precipitation, river discharge, storms/floods, watersheds California, Subregion I, Smith River Cell, Klamath River Cell, Eureka Cell River Mouth and Beach Sediments-Yankee Point to Hurricane Point, California, Part A. Introduction and Grain Size Analyses AUTHOR(S): Pause, P.; Leslie, K.; Wilde, P.; Henshaw, P. University of California, Berkeley, Hydraulic Engineering SOURCE: Laboratory, College of Engineering, 22 leaves, tables, Its HEL-2-37 DATE: 08/01/72 ABSTRACT: 17 intertidal and stream samples from Monterey Bay - Point Sur Area were analysed for grain size properties. These samples were taken to provide source area information for the study of the offshore sediments of the Central California Continental Shelf. The data are presented graphically as cumulative weight percent curves and as histograms with respect to grain size. Statistical parameters including median, sorting coefficient, skewness and kurtosis are calculated for each sample. KEYWORDS: Geomorphology grain size, littoral sediment, river-bed sediment, California, Subregion V, S. Carmel River Reach, Point Sur Cell North Coast Harbor Study AUTHOR(S): Peat, Marwick, Mitchell and Company SOURCE: USACE, San Francisco District, San Francisco, CA, Prepared by Peat, Marwick, Mitchell and Co., San Francisco, California, 1971 DATE: 10/01/71 ABSTRACT: An investigation of the harbor potential of the north coast of

California between Cape San Martin and the California - Oregon borders. The study concentrates on a survey of existing facilities and a demand model for future facilities. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, growth potential/recreation, population, storms/floods California, Subregion I, Subregion II, Subregion IV, Subregion V List of Publications of the U.S. Army Engineer Waterways Expe- riment Station AUTHOR(S): Peck, Rose M. SOURCE: USACE, Waterways Experiment Station, Special Projects Branch, Technical Information Center, Vicksberg, MS, Volume II DATE: 06/01/80 ABSTRACT: Publications are grouped according to the technical laboratories that prepared them and include: Environmental Laboratory; Geo- technical Laboratory; Hydraulic Laboratory and Structures Lab- oratory. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics coastal structures, reservoirs, river-bed sediment, river discharge, river sediment discharge, wave transformation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Tidal Flat Sedimentation at Cooley Landing, S. W. San Francisco Bay AUTHOR(S): Pestrong, Raymond SOURCE: Stanford University, Stanford, CA, 61 pages, prepared in cooperation with San Francisco State, Department of Geology DATE: 01/01/69 ABSTRACT: Tidal marsh and mud flat sedimentation was studied on portions of the southwestern side of San Francisco Bay. Sediments transported and deposited within this low energy, environment are distributed in accordance with a principle of scour and settling lag, put forth for sediments in the North Sea. The finer sediments are concentrated nearer the higher portions of the tidal flats and marshes where lower ebb flow velocities are unable to transport them farther bayward. A sediment budget is maintained within the tidal marshes, whereby the growth of the tidal channels accompanies the extension of the marsh onto the tidal flat. This development is documented on aerial KEYWORDS: Coastal Processes, Geomorphology deltas, estuarine sediment storage, river-bed sediment, sedimentation California, Subregion III, San Francisco Cell Frequencies of Crest Height for Random Combinations of Astronom- ical Tides and

Tsunamis Recorded at Crescent City, California

AUTHOR(S): Petrauskas, Charles; Borgman, L. E. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, College of Engineering (Technical report HEL-16-8), 64 leaves, illustrations, tables DATE: 03/01/71 ABSTRACT: Extreme tidal fluctuations intensify the severity of tsunamis relative to overtopping of protective structures and to resulting property damage, while low tidal fluctuations decrease the severity of tsuanamis. Α computerized method was developed to evaluate the effect of the time of occurence of tsunami on the maximum water level elevation associated with the tsunami. The end result of the computation is a frequency histogram for the fraction of the year the astronomical tides would combine with a given recorded tsunami to produce a specified water level elevation. The method of analysis is KEYWORDS: Coastal Processes, Oceanography & Meteorology tides, tsunamis, wave climate, wave transformation California, Subregion I, S. Smith River Reach, Klamath River Cell Heavy Minerals and Bedrock Minerals on the Continental Shelf of Washington, Oregon, and California AUTHOR(S): Phillips, R. L. SOURCE: Appendix No. 8, OCS Hard Minerals Leasing Program, Feasibility Document (available from NTIS as pb 81-192601), 56 pages DATE: 01/01/79 ABSTRACT: Heavy minerals, including valuable ones such as gold, platinum, and diamonds have been discovered at various locations in California on the continental shelf; and in beach deposits and in elevated terrace deposits. This report compiles published and unpublished data on heavy minerals. KEYWORDS: Geomorphology petrology California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V California Coast Nearshore Processes Study AUTHOR(S): Pirie, Douglas M.; Steller, David D. SOURCE: USACE, San Francisco District, San Francisco, CA, Georesource International, Inc., Seal Beach, CA; U.S. National Aeronautics and Space Admistration, Washington, D.C., SP-351 DATE: 09/01/73 ABSTRACT: The objective of this study was to analyze currents, sediment transport, estuaries, and river discharge along the California coast through the use of synoptic, repetive imagery from the Earth Resources Technology Satellite (ERTS). During ERTS overpasses, airborne and surface data were also collected

for comparing and confirming details of nearshore processes that were detected on ERTS imagery. This type II progress report for March-August 1973 contains the analysis of California coastal currents from three ocean seasons (Davidson Current, Upwelling and Transition). ERTS imagery for each season was assembled into a mosaic of the California coast. Distinct seasonal patterns KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey aerial photography, coastal currents, longshore transport, nearshore currents, remote sensing, river sediment discharge California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V California Coast Nearshore Processes Study: Final Report ERTS-1 Experiment #088 AUTHOR(S): Pirie, Douglas M.; Steller, David D. SOURCE: USACE, San Francisco District, San Francisco, CA, Geoscience Division of Georesource International, Inc., Seal Beach, CA, 164 pages DATE: 05/01/74 ABSTRACT: This study analyzed the nearshore processes along the California coast utilizing ERTS-1 imagery. Findings were confirmed using U-2 photography, low altitude aircraft remote sensing and sea truth data. The major objectives included the interpretation of nearshore currents, sediment transport, river discharge and estuarine surface characteristics. Current direction in the coastal area was detectable in such detail that it is now being used in coastal protection, harbor development and ocean engi- neering projects along the California coast. The surface cur- ent characteristics for the three ocean seasons (Oceanic, David-KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey aerial photography, coastal currents, longshore transport, nearshore currents, remote sensing, river sediment discharge California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V California Nearshore Currents AUTHOR(S): Pirie, Douglas M.; Murphy, Michael J.; Edmisten, J. Robert SOURCE: Shore and Beach, Journal of the American Shore and Beach Preservation Association, O'Brien Hall, University of California, Berkeley, CA, pages 23-34, maps, photos DATE: 10/01/75 ABSTRACT: This article presents a discussion of nearshore California surface

currents and techniques used in the application of remotely sensed data in the monitoring of the coastal current seasons off the coast of California. During the Oceanic Period, from July to November, the southward flowing California Current dominates the nearshore current patterns. Commencing about the middle of November and extending to mid-February, the Davidson Current, a northward moving countercurrent, is the dominant inshore transporter of water and suspensates. Upwelling is prevalent during the period from the middle of February to the KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey aerial photography, coastal currents, nearshore currents, remote sensing California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V California Coastal Processes Study - Aircraft SRT Project X-098 Final Report AUTHOR(S): Pirie, Douglas M.; Murphy, Michael J. SOURCE: U.S. National Aeronautics and Space Administration, Washington, D.C., one volume, looseleaf, illustrations, tables, folding plates DATE: 12/01/75 ABSTRACT: Objective of this study was to apply imagery collected by NASA aircraft platforms in the analysis of nearshore coastal processes related to San Francisco District, USACE, studies and projects. The feasibility of using aircraft imagery systems dyamics was proven. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey aerial photography, coastal currents, longshore transport, nearshore currents, remote sensing, tidal inlets California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V California Coastal Processes Study - Landsat II, Final Report AUTHOR(S): Pirie, Douglas M.; Steller, David D. USACE, San Francisco District, San Francisco, CA; U.S. SOURCE: National Aeronautics and Space Administration, Washington, D.C., (Goddard Space Flight Center), 163 pages DATE: 04/01/77 ABSTRACT: This study reports on the continued use of Landsat data in the analysis and description of long and short-term littoral effects. The processes studied include sediment transport, river discharge, nearshore currents, and estuarine flushing. Landsat data as well as aerial photography and surface data covering a four year period were analyzed to determine the variability of

coastal processes. The investigation included the determination of sediment transport parameters measureable in the Landsat data and application of this information to everyday coastal planning and construction. By using suspended sediments as tracers, other specific objectives were met by the KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey aerial photography, longshore transport, nearshore currents, remote sensing, river sediment discharge, tidal inlets California, Subregion I, Subregion II, Subregion IV, Subregion V Sediment Routing in Tributaries of the Redwood Creek Basin; Northwestern California AUTHOR(S): Pitlick, John SOURCE: National Park Service, Redwood National Park, Crescent City, CA, Research and Development, Technical Report 8 DATE: 10/01/82 ABSTRACT: Detailed study of 16 diverse basins in an attempt to quantify the amount of sediment delivered from stream side landslides; to determine the extent to which major storm events and changes in land use have generated landslides and to assess the role of sediment storage and large organic debris in tributary channels. KEYWORDS: Geomorphology, Hydrology & Hydraulics climatology, river sediment discharge, storms/floods, watershed sediment California, Subregion I, Klamath River Cell, S. Klamath River Reach, Eureka Cell Sources and Nonsources of Beach Sand Along Southern Monterey Bay California-Fourier Shape Analysis AUTHOR(S): Porter, G. A.; Ehrlich, R.; Osborne, R. H.; Combellick, R. A. University of South Carolina at Columbia, Department of Geol.; SOURCE: Journal of Sedimentary Petrology, Lawrence, Kansas: Allen Press, 49(3), 727-732, Sept 1979, Oceanic Abstracts (80-02249) DATE: 09/01/79 ABSTRACT: The shoreline along the southern portion of Monterey Bay, California, was undergoing severe erosion. Industrial and architectural sand had been dredged from this portion of the bay for 70 years. This withdrawal of sand coupled with weak to absent longshore contributions of new sand had been blamed for beach erosion. To determine the importance of potential sources to the sediment budget, 30 samples were compared using Fourier grain shape analysis. Potential sources (including Flandrian and pre-Flandrian dunes, Salinas River, and offshore sands) KEYWORDS: Coastal Processes, Geomorphology

beach nourishment/dredging, coastal erosion, grain size, mining, river sediment discharge, sedimentation California, Subregion IV, S. Monterey Bay Cell Fluvial Sediments Transported by Streams Tributary to the San Francisco Bav Area AUTHOR(S): Porterfield, George; Hawley, N. L.; Dunnam, C. A. SOURCE: U.S. Geological Survey, Open-File Report, p. 70 DATE: 01/01/61 ABSTRACT: Fluvial-sediment input into the San Francsco (S.F.) Bay system was either directly measured, calculated, or estimated to deter- mine the daily average total sediment load entering the system from 1909 to 1959. Suspended sediment was measured from 1957-59 at locations where the major part of the sediment transported by streams to the bay area could be determined. That part of the sediment load not measured with the suspended-sediment sampling equipment was computed by applying Colby's and Hembree's method (1954) to flow data collected between 1909 and 1959. The sediment contributed to the bay system from areas where no sediment measuring stations were located was estimated on the basis of measured sediment-discharge rates from adjoining KEYWORDS: Geomorphology, Hydrology & Hydraulics deltas, estuarine sediment storage, reservoirs, river discharge, river sediment discharge, sedimentation California, Subregion III, Bolinas Bay Cell, San Francisco Cell An Inventory of Published and Unpublished Fluvial-Sediment Data for California, 1956-70 AUTHOR(S): Porterfield, George SOURCE: U.S. Geological Survey, Open-File Report, p. 26 DATE: 01/01/72 This inventory was prepared to provide a reference for ABSTRACT: published and unpublished fluvial-sediment data for water years 1956-70, and substantially updates previous inventories. Sediment stations are listed in downstream order. An alphabetical index of stations is presented at the end of the report. A11 sediment samples listed were analyzed for concentration, by weight, of sediment in the water-sediment mixture. Selected samples were analyzed for particle-size distribution. A graph showing frequency of observations and a table with period of record is also included. KEYWORDS: Hydrology & Hydraulics

river-bed sediment, river sediment discharge, California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Sediment Transport of Streams Tributary to San Francisco, San Pablo, and Suisun Bays, California 1909-66 AUTHOR(S): Porterfield, George U.S. Geological Survey, Water-Resources Investigation 80-64, p. SOURCE: 101 DATE: 01/01/80 ABSTRACT: Hydraulic mining ceased in California in 1884 but the effects on streams continued. In 1917, G. K. Gilbert estimated that sediment transported to the Sacramento-San Joaquin Delta averaged about 2 million cubic yards annually prior to the discovery of gold in 1848 and increased to about 18 million cubic yards annually during 1849 to 1914. Gilbert also predicted that hydraulic-mining effects would continue for about 50 years after 1914, with annual sediment transport averaging not less than 8 million cubic yards. То test Gilbert's pre- diction, sediment transported to the San Francisco Bay system was estimated based on sediment inflow data collected during KEYWORDS: Geomorphology, Hydrology & Hydraulics deltas, estuarine sediment storage, grain size, river-bed sediment, river discharge, river sediment discharge California, Subregion III, Bolinas Bay Cell, San Francisco Cell Evaluation of Criteria for Landslide Classification by Trigger- ing Mechanisms on the California Coast AUTHOR(S): Prager, G. D.; Allen, J.R. Howard-Donley Associates, Redwood City, CA, National Park SOURCE: Service; The Geological Society of America 94th Annual Meeting, November 2-5, 1981, GEOREF (1227368 84 - 20027)DATE: 11/02/81 Not reviewed. ABSTRACT: KEYWORDS: Coastal Processes, Geomorphology coastal erosion, geology, geomorphic processes California, Subregion III, Subregion IV, San Francisco Cell, S. San Francisco Reach, Santa Cruz Cell An Ecological Characterization of the Pacific Northwest Coastal Region, Volume Four, Characterization Atlas- Watershed Unit Descriptions AUTHOR(S): Proctor, Charles E.; Garcia, John, C.; Galvin, David V.; Lewis, Gary в. SOURCE: Ryckman, Edgerley, Tomlinson & Associates, Inc., Bellevue, WA, Sponsor: U.S. Fish & Wildlife Service, Washington, DC, Report No. FWS/0BS-79/14,

557 pages DATE: 07/01/80 ABSTRACT: The ten watershed units described are in the Olympic Rainforest, Willapa-Grays Harbor, Columbia Estuary, Oregon North Coast, Oregon Mid Coast, Lower Umpqua and Lower Roque, Coos- Coqville, Oregon-California Border, Redwood Coast and Continen- tal Shelf. For each unit, the main features of the unit are described; and the physical environment, biological environment, and socioeconomic aspects are presented. References are included. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics beaches, environmental constraints, river discharge, sedimentation, shoreline use, watersheds California, Subregion I Extreme Wind and Wave Return Periods for the U.S. Coast AUTHOR(S): Quayle, Robert G.; Fulbright, Daniel C. Mariners Weather Log, National Oceanic and Atmospheric SOURCE: Administration, U.S. Government Printing Office, Washington, D.C., Volume 19, No. 2, Pages 67-70 DATE: 03/01/75 ABSTRACT: In this paper, extreme winds and waves for specified return periods (recurrence intervals) are estimated from existing climatological data. A mean return period is the average number of years between successive occurrences of values greater than or equal to some threshold value. KEYWORDS: Coastal Processes, Oceanography & Meteorology storm waves, wave climate, wind California, Subregion I, Subregion II, Subregion IV, Subregion V Sub-Tidal Oscillations in Monterey Harbor AUTHOR(S): Raines, William A. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 88 pages (AD-821-043) DATE: 06/01/67 ABSTRACT: Analysis of tide records from Monterey Harbor for the threeyear period 1964-1966 showed that two types of sub-tidal oscillations occur in the harbor having mean periods in the range of 19 to 39 minutes and 1.5 to 2.0 minutes. Their heights, recorded on the tide records, varied from 0.2 to 0.4 feet and from 0.1 to 0.5 feet, respectively. The longer waves occur in trains having durations from a few hours to several days, and have a welldefined

seasonal and diurnal frequency of occurrence, being most common during July and between the hours of 1200 and 1600. KEYWORDS: Coastal Processes, Oceanography & Meteorology tides, wave climate, wind California, Subregion IV, S. Monterey Bay Cell Floods of 1952 in California, Flood of January 1952 in the South San Francisco Bay region AUTHOR(S): Rantz, S. E. SOURCE: U.S. Geological Survey Water-Supply Paper 1260-D, p. 531-575 DATE: 01/01/56 ABSTRACT: The flood of January 1952 in the south San Francisco Bay region was the result of a storm that centered near the summit of the Santa Cruz Mountains, where rainfall totals exceeded 8 inches. This report presents data on stages and discharges at 14 gaging stations, an analysis of flood damages, a brief analysis of the characteristics of the flood hydrographs, and other data pertaining to the flood. Data is presented for Pescadero and Soquel creeks, and the San Lorenzo River. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging California, Subregion IV, S. Half Moon Bay Reach-A, Santa Cruz Cell Surface Water Hydrology of Small Coastal Basins in California between Russian and Eel Rivers AUTHOR(S): Rantz, S. E. SOURCE: U.S. Geological Survey, Water Resources Division, Open-File Report, 98 pages DATE: 10/01/56 ABSTRACT: This report on the surface-water hydrology of small coastal basins in California between Russian and Eel Rivers, was prepared to provide hydraulic data for use in preliminary projec planning by the Department of Water Resources of the State of California. Objectives were the full conservation, control, and utilization of the water resources of California to meet present and future water needs. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology geology, precipitation, river discharge, stream gaging, watersheds California, Subregion I, Subregion II Floods of January 1953 in Western Oregon and Northwestern California AUTHOR(S): Rantz, S. E. SOURCE: U.S. Geological Survey, Water-Supply Paper 1320-D, p. 321-339 DATE: 01/01/59

Coastal basins in California north of the Mattole and lower ABSTRACT: Eel Rivers were affected by the floods of January, 1953. This report presents a map of precipitation during the flood and an analysis of peak discharges for the Klamath River, Redwood Creek, and the Mad River. Discharge hydrographs and peak flood stages and discharges for selected streams are also presented. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging California, Subregion I, Smith River Cell, Klamath River Cell, Eureka Cell, Mattole River Cell Surface Water Hydrology of Coastal Basins of Northern California as Related to Geology and Topography AUTHOR(S): Rantz, S. E. SOURCE: University of California at Davis, Davis, CA, 11 pages DATE: 01/01/62 ABSTRACT: The paper presents a brief sketch of the surface water hydrology of the coastal basins of Northern California and demonstrates how hydrology is affected by the geology and topography of the region. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology geology, precipitation, river discharge, stream gaging, submarine canyons California, Subregion I, Subregion II, Smith River Cell, S. Smith River Reach, Klamath River Cell, S. Klamath River Reach Floods of January-February 1963 in California and Nevada AUTHOR(S): Rantz, S. E.; Harris, E. E. SOURCE: U.S. Geological Survey, Open-File Report, page 74 DATE: 01/01/63 ABSTRACT: Intense precipitation, on January 29-31, 1963, following a record breaking 42 day drought caused flooding in California and Nevada. Coastal areas between Big Sur and Jenner were affected. Peak discharges and stages for the 1963 flood and for the maximum previously recorded flood are presented for selected streams in the flood-affected area. An isohyetal map for the storm is also presented. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, reservoirs, river discharge, river sediment discharge California, Subregion II, Subregion III, Subregion IV, Subregion V, Russian River Cell, Carmel River Cell, Point Sur Cell Floods of December 1955-January 1956 in the Far Western States-: Part 2, Streamflow Data AUTHOR(S): Rantz, S. E.

SOURCE: U. S. Geological Survey Water-Supply Paper 1650-B, 580 pages DATE: 10/01/63 ABSTRACT: This paper presents hydrologic information on the floods of December 1955-January 1956 and complements the descriptive material in Watersupply Paper 1650-A. Data presented consists of records of stage and discharge for gaging stations, and peak- stage and peak discharge information for numerous miscellaneous sites and partial-record stations in or on the fringe of the area of intensive flooding. The records are presented in more detail than those in the regular annual reports. In general, the information presented for each gaging station is: a des- cription of the station, a tabulation of daily mean discharges for December 1955-January 1956, and a tabulation of stages and discharges at selected intervals (sometimes only an hour apart) KEYWORDS: Hydrology & Hydraulics reservoirs, river discharge, stream gaging California, Subregion I, Subregion II, Subregion IV Surface-Water Hydrology of Coastal Basins of Northern California AUTHOR(S): Rantz, S. E. SOURCE: U.S. Geological Survey Water-Supply Paper 1758, page 77 DATE: 01/01/64 An analysis of the surface-water hydrology of coastal basins ABSTRACT: of California, north of the southern boundary of the Eel River Basin, are presented. A 60-year base period, 1900 to 1959, has been used in this report to study mean annual basin-wide precipitation, runoff, and water loss in drainage basins above key gaging stations and above the mouths of principal streams. This base period includes several series of wet and dry years, so the mean annual runoff for this period is therefore probably somewhat representative of the long-term mean. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging, watersheds California, Subregion I, Smith River Cell, Floods of December 1964 in the Far Western United States AUTHOR(S): Rantz, S. E.; Moore, A.M. SOURCE: U.S. Geological Survey, Open-File Report (65-131), page 205 DATE: 01/01/65 ABSTRACT: The floods of December 1964. This paper presents hydrologic information on these floods and was outstanding not only for recordbreaking peak discharges, but also for the unusually large area involved-Oregon, northern California, western Nevada and Idaho, and southern Washington. Coastal drainage basins in California north of San Francisco Bay were affected. Damage

was relatively light in the small coastal basins between San Francisco Bay and the Russian River. Damage was substantial in basins to the north of the Russian River and flood peaks were commonly the highest ever recorded. Maximum stage and discharge data are given for selected coastal streams in northern California. Daily suspended-sediment data for the period of the storm is given for the Russian and Mad Rivers. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, river sediment discharge, stream gaging California, Subregion I, Subregion II, Subregion III, Eureka Cell, S. Eureka Reach Flood of December 1964 in Redwood Areas of North Coastal California AUTHOR(S): Rantz, S. E. SOURCE: U.S. Geological Survey Open-File Report (65-130), page 39 DATE: 01/01/65 ABSTRACT: Intense rainfall during late December produced a recordbreaking flood in the redwood areas of north coastal California. In a large part of this area, rainfall, lasting for 1 of more days, and peak discharge were of such magnitude that they indicate an average return period in excess of 100 years. Only data analyzed before March 1, 1965 is presented. Peak discharge, maximum suspended sediment concentrations, and precipitation data for selected basins are presented here. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, river sediment discharge, stream gaging California, Subregion I, Subregion II, Floods of December 1964; In the Far Western States AUTHOR(S): Rantz, S. E.; Moore, A. M. SOURCE: U.S. Geological Survey, Department of the Interior, tables, maps, photos, 205 pages DATE: 03/01/65 ABSTRACT: In late December 1964, record breaking floods occurred in the far Western States. This report presents all flood data avail- able in the U.S. Geological Surveys files as of February 15, 1965. A description of the storm, a description of the floods, storages regulation, suspended sediment, flood damage, stream- flow data, suspended sediment data are in this report. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, reservoirs, river discharge, river sediment discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V

Surface-Water Hydrology of California Coastal Basins Between San Francisco Bay and Eel River AUTHOR(S): Rantz, S. E.; Thompson, T.H. SOURCE: U.S. Geological Survey Water-Supply Paper 1851, page 60 DATE: 01/01/67 ABSTRACT: This report presents an analysis of the surface-water hydrology of the coastal basins California that lie between the north shore of the San Francisco Bay and the south boundary of the Eel River basin. Precipitation, runoff, flow, and flood frequen- cy information is presented for basins and streams within the study area. A flood-frequency study of the region indicates that the magnitude of floods of any given frequency can be related to size of drainage area and to mean annual basinwide precipitation. Mean annual basinwide precipitation is an excellent index of the relative magnitude of storms of any given frequency because the bulk of the precipitation occurs during several general storms each year, and the same number KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion III Average Annual Precipitation and Runoff in North Coastal California AUTHOR(S): Rantz, S. E. SOURCE: U.S. Geological Survey, Hydrologic Investigation Atlas HA-298, 1 sheet, pamphlet,4 pages DATE: 01/01/68 ABSTRACT: Four 1:1,000,000 scale maps are presented showing the hydrologic characteristics of California coastal basins north of San Francisco Bay. The maps show the areas principal drainage systems and hydrologic units and includes isopleths of average annual precipitation, runoff, and evaporation. A close relationship between average annual runoff and average annual precipitation and potential evapotranspiration is apparent from looking at these maps. Multiple linear regression equations relating these elements are derived for each of the two phy- siographic sections or subregions in the study area-the Coast Ranges and the Klamath Mountains. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology, Survey maps, precipitation, river discharge, watersheds California, Subregion I, Subregion II, Subregion III

Floods of October 1962 in Northern California

AUTHOR(S): Rantz, S. E. SOURCE: U.S. Geological Survey Water-Supply Paper 1820, pages 121-126 DATE: 01/01/68 ABSTRACT: A storm on October 10-14, 1962 caused severe flooding in northern California. In the San Francisco Bay area, total pre- cipitation during storm ranged from 5 to 8 inches at the low al- titudes and up to 22 inches in the Santa Cruz Mountains to the south, where daily catches of more than 13 inches were reported. The runoff, although heavy, was generally lighter than might be expected from the rainfall because this was the first storm of the season and large soil-moisture deficiencies existed. Inclu- ded in the peak stream discharge and stage data are three coastal streams stations: (1) Pescadero Creek, (2) San Lorenzo River, and (3) Soquel Creek. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging California, Subregion IV, S. Half Moon Bay Reach-B, Santa Cruz Cell Runoff Characteristics of California Streams AUTHOR(S): Rantz, S. E. SOURCE: U.S. Geological Survey Professional Paper 2009-A, page 38 DATE: 01/01/72 ABSTRACT: The general relationships between runoff characteristics and climate, topography, and basin geology for California streams are addressed in this report. A 1:250,000 scale, color map di- vides California into precipitation zones. Along the north coast of California, a mean annual rainfall is usually greater than 40 inches. In central coastal California mean annual pre- cipitation ranges from 10 to greater than 40 inches. Mean annual water discharges for six Coast Range streams are also included in this report. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology, Survey maps, precipitation, river discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Marine Air Penetration of the Monterey Bay Coastal Strip and Salinas Valley, California AUTHOR(S): Read, Robert G. SOURCE: Moss Landing Marine Laboratories, Moss Landing, CA, and California State University at San Jose, Department of Meteo- orology, 93 illustrations, tables (Technical Publication 71-2) DATE: 01/01/71 ABSTRACT: The composition and circulation of marine air penetration of Monterey Bay coastal strip and the Salinas Valley were investi- gated. Integration of the environmental factors of temperature, humidity and circulation of the marine air is related to potential evapotranspiration

measurements made at crop levels from the coast inland. Moisture zoning is indicated and daily rates of potential evapotranspiration 40 miles inland vary from 2 to 3.5 times the coastal rate. KEYWORDS: Coastal Processes climatology, wind California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Air Flow-Land-Sea Air Interface, Monterey Bay, California-1971 AUTHOR(S): Read, Robert G. SOURCE: Moss Landing Marine Laboratory, Moss Landing, CA, 25 leaves, illustrations, (Technical Publication No. 72-4) Annual Report, Part I, July 1972 DATE: 07/01/72 Air flow at the land-sea-air interface influences the ABSTRACT: atmospher- ic conditions that determine the transport, dilution, and trapping of natural and man-made air pollutants in the coastal areas of Monterey Bay and the Salinas Valley. Analysis of the hourly air flow on a daily and monthly basis indicates patterns of stagnation from midnight to noon of the following day with moderate to strong air flow during period 1300 to 2200. Suggestions for urbanization and industrializa- tion are made on the basis of an understanding of the atmospheric conditions which lead to trapping and dispersal of atmospheric waste. KEYWORDS: Coastal Processes climatology, urbanization, wind California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Studies of the California Current System AUTHOR(S): Reid, Joseph L., Jr.; Roden, Gunnar I.; Wyllie, John G. SOURCE: California Department of Fish and Game, Sacramento, CA, Marine Research Committee, California Cooperative Oceanic Fisheries Investigations, Progress Report DATE: 01/01/58 ABSTRACT: The article describes the waters of the California current and their manner of flow in relation to the California fishery. Seasonal variations and long term variations are mentioned and some attempt at relating environment to the organisms has been made. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, wind California, Subregion I, Subregion II, Subregion IV, Subregion V Oceanography of the Northeastern Pacific Ocean During the Last Ten Years AUTHOR(S): Reid, Joseph L., Jr.

SOURCE: California Department of Fish and Game, Sacramento, CA, California

Cooperative Oceanic Fisheries Investigations DATE: 01/01/60 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology climatology, coastal currents, nearshore currents, storm waves, tides, wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Direct Measurements of the Davidson Current off Central California AUTHOR(S): Reid, Joseph L., Jr.; Schwartzlose, Richard A. SOURCE: Journal of Geophysical Research, Richmond, VA, Volume 67, No. 6 DATE: 06/01/62 ABSTRACT: Direct measurements of the nearshore surface currents along the coast of central California were made in October 1958 and Jan- uary 1959. Parachute drogues were used to determine trajectory and speed. Hydrographic casts were made concurrently over the surrounding area to compare the droque results with the geostro- phic flow calculated from density measurements. Very good agreement was found in direction, but the geostrophic speed calculated from a weak gradient over a short distance did not give accurate results. Τn October the coastal waters were just be- ginning to flow northward, and velocities measured by both drog- ues and the geostrophic approximation indicated some irregular- ity. In January the northward-flowing Davidson current was well KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, Subregion III, Subregion IV, Subregion V Measurements of the California Countercurrent at a Depth of 250 Meters AUTHOR(S): Reid, Joseph L., Jr. Journal of Marine Research, New Haven, CT: Sears Foundation SOURCE: for Marine Research, Volume 20, Number 2, July 15, 1962, pages 134-137 DATE: 07/15/62 ABSTRACT: Measurements of the flow at 250 m below the surface were made with parachute droques laid out at 5-mile intervals on a line 125 nautical miles in length extending landward from 35 deg. 52.0' N, 124 deg. 28.9' W to the 1,000-fathom curve at 36 deg. 36' N off Monterey, California. The drogues were followed for 48 hours. A northward flow, about 40 miles in width, with a maximum flow of 0.44 kt at the center, was seen near the coast. Along the next 60 miles of the drogue line, flow was to the southeast at speeds up to 0.51 kt. In the section farthest offshore, flow was to the northeast and KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents

California, Subregion IV, Subregion V, S. Monterey Bay Cell, Carmel River Cell, S. Carmel River Reach, Point Sur Cell A Drift Study of the Southern Monterey Bay AUTHOR(S): Reise, Jeffery A. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 113 pages DATE: 09/01/73 ABSTRACT: 2100 drift bottles were dropped at five stations (twice per day) in southern Monterey Bay over a period of 14 months. 47.7% (1002) were recovered. Over 99% of the recoveries were made in the bay. The indicated circulation in the southern bay agrees with models driven by wind stress and momentum transfer from the offshore ocean currents. A significant difference was found between the morning and afternoon drops with the morning drop returns being larger and found closer to the drop point. The afternoon returns were more widely dispersed in the direction of the ocean-driven component of the coastal current. The diurnal variation of the bottle returns is attributed to the diurnal seabreeze. The drift bottles seemed to follow the coastal KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, wind California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Ocean Beach, A Fun Place With a Deadly Side AUTHOR(S): Reiterman, Jim SOURCE: San Francisco Examiner, San Francisco, CA, pages 1-6 DATE: 03/29/78 Description of drownings and the rip currents at Ocean Beach. ABSTRACT: Also, what could be done to keep people out of the water. KEYWORDS: Coastal Processes, Socioeconomics institutions/planning/mgmt., nearshore currents, shoreline use California, Subregion III, San Francisco Cell Recent Sedimentation Along the Big River Estuary; Mendocino County AUTHOR(S): Reneau, Steven L. SOURCE: University of California at Santa Cruz, published in California Geology, California Division of Mines & Geology, Sacramento, CA, Volume 34, No. 122, 255-259 pages, (AD-E607 365 818 1312) DATE: 12/01/81 ABSTRACT: Estuaries provide a habitat for both sessile and migratory organisms that, in many cases, are of economic importance to man. A geomorphic study was performed along the Big River Estuary in 1979 as part of a natural resource survey. During this study it was revealed that major geomorphic changes,

resulting from substantial sedimentation, have occurred in the estuary during this century. The vegetation distribution on the salt marsh flats has changed because of this sedimentation. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics beaches, coastal erosion, estuarine sediment storage, river discharge, river sediment discharge, sedimentation California, Subregion II, S. Ten Mile River Reach Ocean Bottom Currents Off The California Coast AUTHOR(S): Revelle, R.; Dietz, R. S. SOURCE: Science, American Association for the Advancement of Science, Washington, D.C., May 1939 DATE: 05/01/39 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology coastal currents, nearshore currents California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Closure Conditions at the Mouth of the Russian River AUTHOR(S): Rice, Peter M. SOURCE: USACE, Jacksonville District, Florida: Shore and Beach, Journal of the American Shore and Beach Preservation Assoc., O'Brien Hall, Univ. of California, Berkeley, Vol. 43, No. 1, p. 15-20 DATE: 04/01/74 ABSTRACT: Sixty miles north of San Franisco on the north central coast of California the Russian River enters the Pacific Ocean near the small community of Jenner. Since the mid-19th century, there were attempts to create and maintain a navigable channel between the river and ocean. In 1941, the construction of a single jetty at Jenner was completed. The jetty failed in its original purpose; however, it was realized later that it was of considerable importance in providing a channel for the ingress and egress of fish to and from spawning grounds in the river. For about 2 months (October and November) a year, a sand bar forms across the Russian River mouth allowing little or no water KEYWORDS: Coastal Processes, Hydrology & Hydraulics littoral sediment, offshore/onshore transport, river discharge, sand bars, tidal inlets, wave climate California, Subregion II, Russian River Cell The Mouth of the Russian River AUTHOR(S): Rice, Peter M. SOURCE: University of California, Berkeley, Department of Wave Engineering,

Division of Hydraulic and Sanitary Engineering, 166 pages, photos, diagrams, tables DATE: 06/01/74 ABSTRACT: An investigation was conducted on hydrographic and hydrologic conditions at the mouth of the Russian River. A general dis- cussion of the project area is followed by a brief history of important events that helped create and shape opinions regarding future projects in the study area. Also. physical parameters and characteristics were evaluated in relation to the opening and closing of the river mouth. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., littoral sediment, offshore/onshore transport, river discharge, sand bars, California, Subregion II, Russian River Cell Beyond the Tides: The Uncertain Sea. Chapter VII of Between Pacific Tides, 3rd ed., by Joel W. Hedgpith AUTHOR(S): Ricketts, Edward F.; Calvin, Jack Stanford University Press, Stanford, CA, pp. 376-406, tables, SOURCE: diagrams, bound together with Chapters V and VI, Appendix and Index of Between Pacific Tides DATE: 01/01/62 ABSTRACT: This chapter is an introduction to the life of the Pacific Ocean along the shores of its northeastern edges. The general pattern of movement of the surface layers of the northern pacific is discussed with special reference to the California current. Emphasis is placed on fish movements. KEYWORDS: Oceanography & Meteorology coastal currents California, Subregion I, Subregion II, Subregion IV California Undersea Aqueduct Reconnaissance: The Oceanography AUTHOR(S): Riffenburgh, Robert H. SOURCE: U.S. Naval Undersea Center, San Diego, CA, 14 pages, illustrations, tables, folding plates. NUC TP 353 DATE: 08/01/73 ABSTRACT: This is a reconnaissance report on the subsurface offshore conveyance of fresh water from Northern to Southern California. The physical properties of the Oceanic Water Column, especially near the seafloor, were studied. The region investigated was between Crescent City and San Diego, from the 20 to the 200m. depth contour. Variables most important to planning California Undersea Aqueduct were divided in two categories; risks and variables influencing the construction and maintenance. KEYWORDS: Oceanography & Meteorology, Socioeconomics

coastal currents, maps, tsunamis, wave climate, wave transformation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Bed-Material Movement, Middle Fork Eel River, California AUTHOR(S): Ritter, John R. SOURCE: U.S Geological Survey, Professional Paper 575-C, page 219-221 DATE: 01/01/67 ABSTRACT: The Middle Fork Eel River, at a discharge of about 3,750 cfs and an average velocity of about 6 fps, moved bed material of cobble size. The size of the transported material was determined by the use of photographs, and noting which individual rocks had been removed from painted areas on the riverbed. KEYWORDS: Coastal Processes, Oceanography & Meteorology grain size, river-bed sediment, river discharge, river sediment discharge, stream gaging California, Subregion I, Eureka Cell Measurement of Water Flow and Suspended-Sediment Load, Bolinas Lagoon, Bolinas, California AUTHOR(S): Ritter, John R. SOURCE: U.S. Geological Survey, Professional Paper 650-B, pages B189-B193 DATE: 01/01/69 ABSTRACT: Measurements of water flow and sediment load at the Bolinas Lagoon inlet for a 10-hour tidal period (floodtide and ebb-tide) on June 22, 1967, revealed that 152 tons of suspended sediment was carried into the lagoon by the floodtide, whereas only 36 tons was carried out of the lagoon by the ebbtide. However, the major ebbtide which was not measured probably carried the lar- gest load of the day. Bedload made up as much as 18 percent of the total load during floodtide and 15 percent during ebbtide. The maximum measured water flow and maximum average velocity during floodtide were 5,810 cubic feet per second and 3.5 feet per second, respectively; during ebbtide the maximums were KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics estuarine sediment storage, grain size, longshore transport, nearshore currents, river sediment discharge, tidal inlets California, Subregion III, Bolinas Bay Cell A Summary of Prelimnary Studies of Sedimentation and Hydrology in Bolinas Lagoon, Marin County, California AUTHOR(S): Ritter, John R.

SOURCE: U.S. Geological Survey, Circular 627, p. 22 (Section on minerology by E. J. Helley) DATE: 04/04/69 ABSTRACT: This program investigated sedimentary and hydrologic conditions in Bolinas Lagoon, beginning in May 1967 and continuing into 1970, was undertaken by the U.S. Geological Survey. Only the study results analyzed before June 1968 are summarized in this report. Two series of measurements of suspendedsediment load and water discharge in the lagoon inlet showed that much of the suspended sediment is sand and that the average velocity was as much as 4.7 ft per second. In most of the lagoon, median size of bottom sediment was a fine sand derived chiefly from Monterey Shale. Circulation velocities in the lagoon decreased rapidly away from he inlet, but probably remained high enough to erode KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics estuarine sediment storage, littoral sediment, longshore transport, nearshore currents, river sediment discharge, tidal inlets California, Subregion III, Bolinas Bay Cell Preliminary Studies of Sedimentation and Hydrology in Bolinas Lagoon, Marin County, California, May 1967 - June 1968 AUTHOR(S): Ritter, John R. SOURCE: U.S. Geological Survey, Department of the Interior, Water Resources Division, Sacramento, CA, Open-File Report, 67 pages, tables, maps, photos, graphs DATE: 04/04/69 ABSTRACT: In May 1967 the U.S. Geological Survey began an investigation of the hydrology and sedimentation in Bolinas Lagoon in cooperation with the Bolinas Harbor District and Marin County. The lagoon, a potential small craft harbor, seemed to be filling with sedi- ment. The puposes of the investigation was to define the sources and movement of sediment in the lagoon. This report presents the results of studies conducted from May 1967 to June 1968. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics estuarine sediment storage, littoral sediment, longshore transport, nearshore currents, river sediment discharge, tidal inlets California, Subregion III, Bolinas Bay Cell Turbidity and Suspended-Sediment Transport in the Russian River Basin, California AUTHOR(S): Ritter, John R.; Brown, W. M. III

SOURCE: U.S. Geological Survey, Menlo Park, Calif. Open-File Report, October 1, 1971, 100 pages DATE: 10/01/71 ABSTRACT: The Russian River in north coastal California is persistently turbid. To determine the source of the turbidity and the rate of sediment transport in the basin, a network of sampling stations was established in February 1964 along the river, on some of its tributaries, and near Lake Pillsbury in the upper Eel River basin. Turbidity and concentration of suspended sediment, expressed in milligrams per liter, were highly correlative (r>0.90) at almost every sampling station. The correlation differed because the size of particles finer than sand produce a higher turbidity than does an equal concentration of sand. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology grain size, precipitation, reservoirs, river sediment discharge, sand entrapment, stream gaging California, Subregion I, Subregion II, Eureka Cell, Russian River Cell Map Showing Areas of Potential Inundation by Tsunamis in the San Francisco Bay Region, California AUTHOR(S): Ritter, John R.; Dupre, William R. SOURCE: U.S. Geological Survey, Department of the Interior, U.S. Department of Housing and Urban Development DATE: 01/01/72 This map, showing areas of potential tsunami danger, also ABSTRACT: details areas where highway traffic may be disturbed. May be used to suggest possible routes for detours or used as a guide for development of structures to prohibit potential danger. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics coastal structures, environmental constraints, institutions/planning/mgmt., maps, tsunamis California, Subregion III, Subregion IV, Subregion V Sediment Transport in a Tidal Inlet AUTHOR(S): Ritter, John R. U.S. Geological Survey; Proceedings of the 13th Costal SOURCE: Engineer- ing Conference, Vancouver, ASCE, New York, NY, Volume 2, pages 823-842, July 10 - 14, 1972 DATE: 07/10/72 ABSTRACT: Tidal flow and suspended-sediment discharge were measured in or near the inlet to Bolinas Lagoon through seven ebbtides and six floodtides. The

highest flows and suspended-sediment discharges occurred during the major daily ebbtide. Most transported sediment was sand and most sediment deposited in the lagoon was sand. Computations from a relation of suspended-sediment discharge and tidal range indicated that the annual suspended-sedi- ment discharge of ebbtides exceeded that of floodtides by 9,000 tons. The highest concentration of suspended sediment occurred near the east shore of the inlet, which is at the end of a sand spit. The measured volume of water moved by a tide ranged from KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics estuarine sediment storage, littoral sediment, longshore transport, nearshore currents, river sediment discharge, tidal inlets California, Subregion III, Bolinas Bay Cell Sand Transport by the Eel River and Its Effect on Nearby Beaches AUTHOR(S): Ritter, John R. SOURCE: U.S. Geological Survey Open-File Report [73-236 DATE: 01/01/73 ABSTRACT: An analysis of the mineralogy and textural parameters of the Eel River and beach sands was performed to determine the sources of the nearby beach The Eel River basin in California has one of the largest sediment sands. yields per unit area in the world. Sand composes about 25% of the total sediment transported by the river into its estuary. The annual sand load averaged about 4,600,000 tons for the 58 year period of 1911-1914 and 1917-1970. Most of this sand probably enters the ocean, some is deposited in the estuary, and the amount furnished to nearby beaches probably is small. Of the sand and finer sediment debouched by the Eel River into the ocean, the major part is scattered over the continental margin, some is lost to the Eel Canyon, and some is deposited offshore near the Eel River mouth. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics beaches, estuarine sediment storage, grain size, petrology, river sediment discharge, submarine canyons California, Subregion I, Eureka Cell Bolinas Lagoon, Marin County, California, Summary of Sedimentat- ion and Hydrology, 1967-69 AUTHOR(S): Ritter, John R.; Brown, William M. III SOURCE: U.S. Geological Survey, Dept. of Interior, Water Resources Investigations 19-73, 1-60, also section on Fluorescent-Tracer Study of Sediment Movement", p. 61-74 by William M. Brown DATE: 08/01/73

ABSTRACT: This report summarizes the results of studies made from 1967-1969 and supplements earlier reports. The purpose of the study of Bolinas Lagoon was to define the sources and movement of sediment in the lagoon; describe the processes of sedimentation; and determine the rate of sediment accumulation. The scope of the study included relating hydrologic processes. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics estuarine sediment storage, littoral sediment, longshore transport, nearshore currents, California, Subregion III, Bolinas Bay Cell Management of the Coastal Zone AUTHOR(S): Robb, John E. SOURCE: Bechtel Corporation, San Francisco, CA, 42 pages, University of California Extension, Statewide Lecture Series, available at University of California, Berkeley, Water Resources Archives DATE: 11/01/69 ABSTRACT: A discussion on the dynamics of change in the Coastal Zone, the conflict among opposing forces in the use of resources, and some proposed institutional planning and operational methods. Maps, photos, and illustrations are included. Paper was delivered as a lecture. KEYWORDS: Socioeconomics institutions/planning/mgmt., maps, property value/land use, shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V "Geomorphology of the Smith River Plain and the Dynamics of the Beaches in the Vicinity of Crescent City, California" AUTHOR(S): Roberts, James A; Dolan, R. Shore and Beach, Journal of American Shore and Beach SOURCE: Preservation Association, O'Brien Hall, University of California, Berkeley, CA, April 1968 DATE: 04/01/68 ABSTRACT: A study to relate the geomorphology of the Smith River Plain to Dynamics changes at South Beach. Report include: (1) description of the Smith River Plain; (2) Geology of the Smith River Plain; (3) description of wind waves and littoral current; (4) seasonal beach changes summary. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology geology, littoral sediment, longshore transport, river sediment discharge, shoreline changes, wave climate California, Subregion I, Smith River Cell,

The Effects of Wind and Precipitation on the Modification of South Beach, Crescent City, CA, incl. Appendix on The Focusing of Tsunami Energy AUTHOR(S): Roberts, James A.; Karper, E. K. SOURCE: USACE, San Francisco District, by Meterology Research Inc., Altadena, CA, Cont. No DA-49-092-ARD-38, October 1964, 63 pages DATE: 10/01/64 ABSTRACT: The objectives of this report were to explore the direct and indirect effects of the March 1964 Tsunami on South Beach, and provide a means by which to explore the following questions: (1) Does a beach change back to its "original" conditions after catastrophic modification? (2) If so, how long does the change take? If not, does the catastrophic change "permanently" modify the beach? (3) Would South Beach take on cyclic characteristics rather than continue as a non-cyclic beach? Additional objectives of the study were to increase the under- standing of the effects of wind and precipitation in the KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology beaches, climatology, coastal erosion, precipitation, tsunamis, wind California, Subregion I, S. Smith River Reach, Klamath River Cell The Effects of Wind and Precipitation on the Modification of South Beach, Crescent City, California AUTHOR(S): Roberts, James A.; Kauper, Erwin K. SOURCE: Atmospheric Research Group, Altadena, CA, 32 pages, Appendix A on "Focusing of Tsunami Energy at Crescent City," 11 pages, Appendix B, Summary of Travel Maps, AR 646 FR-186 DATE: 10/14/64 The objectives of the study were to increase the ABSTRACT: understanding of the effects of wind and precipitation in the formation and modification of a beach. Assessed and observed were the effects os subaerial processes on a beach modified catastrophically by a geomorphologic agent, using a beach in the Crescent City area as a base line for further developments. After the first field work, it was determined that the beach had indeed been modified but not. as originally thought, by a Tsunami. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology beaches, coastal erosion, geomorphic processes, precipitation, tsunamis, wind California, Subregion I, S. Smith River Reach, Klamath River Cell Investigation of Marine Processes and Coastal Land Forms Crescent City, California AUTHOR(S): Roberts, James A.; Bleistein, D. M.; Dolan, R.

SOURCE: U.S. Department of the Army, Atmospheric Research Group, Altadena, CA, Contract No. DA-19-129-AMC-684 (N) DATE: 06/01/67 ABSTRACT: The objectives of this study were (1) to investigate the dynamics of South Beach, Crescent City, and its relationship to the geomorphology of the Smith River Plain; and (2) to develop suitable techniques to accomplish this study. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology beaches, geology, geomorphic processes, longshore transport, wave climate, wind California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell Investigations of Marine Processes and Coastal Landforms Near Crescent City, Calif, Volume I, Technical Discussion AUTHOR(S): Roberts, James A.; Bleistein Donald M. Atmospheric Research Group, Altadena, CA Report No. SOURCE: ARG67-FR-616-Vol-1, 83 pages (AD-655-007) DATE: 07/01/67 ABSTRACT: The objective of the study was to relate the beach dynamics to the overall morphology of the Smith River Plain. The Smith River Plain is a lowland segment of the Klamath Mountains Province. The structure of the plain is controlled by diastrophism. The general configuration of the plain is controlled by location, orientation, and exposure of bedrock. Several key sites were selected for this study and specialized sampling techniques for seasonal profiling and for short, intensive study were used. South Beach is an arcuate beach, about four miles in length, composed principally of medium to fine grained sands. The beach reflects only minor seasonal or KEYWORDS: Coastal Processes, Geomorphology beaches, beach profiles, geomorphic processes, grain size, maps, wave climate California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell Littoral Transport Study, Crescent City Harbor, California AUTHOR(S): Roberts, James A.; Beesmer, K. M.; Seeman, E. L. SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 08/30/70 ABSTRACT: This report presents the results of an investigation into the effect on the littoral regime of three proposed harbor improve- ment plans on shoaling in the Harbor at Crescent City, Califor- nia. It addresses the question of the

effect these plans will have on the transport of littoral materials within the harbor. Three primary parameters of the present littoral system were investigated: sediment sources, apparent dynamics, and resultant shoaling. This report is based on (a) previous work at the site by the principal investigator of this project, (b) analysis of data provided by the Corps of Engineers, (C) extension of these data and previous experience through application of available model-and scientific-techniques, and (d) a field inspection of the site on June 17, 18, and 19, 1970, and underwater inspection KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics littoral sediment, longshore transport, river sediment discharge, sedimentation, shoreline changes, tidal inlets California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell Ocean Outfall Dilution: Effects of Currents AUTHOR(S): Roberts, Philip J. W. SOURCE: Journal of the Hydraulics Division of American Society of Civil Engineers, New York, NY, Issue No. 5, 1980, pages 769-782 DATE: 05/01/80 ABSTRACT: Extensive current meter and other oceanographic data were collected during an effort to design sewage outfalls for the City of San Francisco, CA. Analyses of the current meter data showed the currents to be dominated by the proximity of the Golden Gate entrance. The first principal component of the cur- rents was strongly tidal and flowed in a direction pointing towards the Golden Gate. The second principal component, ortho- gonal to this, contained relatively more high and low frequency content. The first principal component contained much more energy than the second principal component. Where possible, diffusers were aligned perpendicular to the first principal cur- rent component to achieve the greatest beneficial effects of the KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal currents, environmental constraints, precipitation, tidal inlets California, Subregion III, San Francisco Cell, S. San Francisco Reach Seiching in Monterey Bay AUTHOR(S): Robinson, David B. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 67 leaves, illustrations, tables DATE: 10/01/69

ABSTRACT: Spectral analyses of simultaneous tidal records from the northsouth extremities of the bay were performed for 23 January and 20 April 1969 to investigate the effect of Monterey Submarine Canyon on seiching. Both dav's records had long-wave activity of which seiching was at least a contributing mechanism. Analyses of the computed spectra for the periods during the long-wave activity, and ten-hour periods both before and after, indicated that the seiching motion in Monterey Bay has similar amplitudes at the north-south extremities. KEYWORDS: Coastal Processes, Oceanography & Meteorology submarine canyons, tides, wave climate, wave transformation California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Map Showing Soundings and Reef at Granada Beach AUTHOR(S): Rogers, A. U.S. Coast and Geodetic Survey, (now National Ocean Service, SOURCE: Rockville, MD), 1879 DATE: 01/01/69 ABSTRACT: Map 41.5*41 cm., scale 1:20,000 soundings in feet to 18 feet and beyond that in fathoms for Granada Beach in Half Moon Bay. KEYWORDS: Survey hydrographic surveys, maps California, Subregion III, Half Moon Bay Cell The Economic Context of the California Coastal Plan AUTHOR(S): Rooney, Robert E., Ph.D. SOURCE: The Planning and Conservation League Foundation (summary of full report is also available), Los Angeles, CA, 200 pages; Summary, 38 pages DATE: 11/01/75 ABSTRACT: This study discusses recommendations for effective long-term solutions to economic problems related to California's coast. Concerns California's natural resources, both publicly and privately-owned and the effects of comsumption on future generations. KEYWORDS: Socioeconomics environmental constraints, population, urbanization California, Subregion I, Subregion II, Subregion IV, Subregion V Dollars and Sense: The Economic Context of the California Coastal Plan AUTHOR(S): Rooney, Robert E., Ph.D. SOURCE: The Planning and Conservation League Foundation, Los Angeles, CA, 38 pages, tables, appendices DATE: 01/01/76 ABSTRACT: This is a synopsis of "The Economic Context of the California Coastal Plan". A discussion of the social and economic effects of the coastal plan with regard to pollution, marine resources, agricultural resources, property tax policies, energy developments. The appendices provide data and excerpts from various government and other authorities to support the

assumptions of the report. KEYWORDS: Socioeconomics environmental constraints, population, property value/land use, urbanization California, Subregion I, Subregion II, CODE-1: Moored Array and large-Scale Data Report AUTHOR(S): Rosenfeld, Leslie K. Woods Hole Oceanographic Institution, Technical Report, SOURCE: Prepared for the National Science Foundation, under Grant OCE80-14941, Ocean Dynamics Experiment, CODE TR. No 21, August 1983 DATE: 08/01/83 ABSTRACT: This report includes data on large-scale current and temperature measurements, Lagrangain flow measurements, ship- board current measurements, and satellite data for the S. Navarro River--Russian River Coastal area. KEYWORDS: Oceanography & Meteorology coastal currents, wave climate, wind California, Subregion II, S. Navarro River Reach-B, Russian River Cell Morphological changes in a California Estuary: Sedimentation and Marsh Invasion at Bolinas Lagoon AUTHOR(S): Rowntree, Rowan A. SOURCE: California University, Berkeley, Dissertation (Ph.D. in Geography), 27 pages, photos, maps, diagrams DATE: 01/01/73 ABSTRACT: This work addresses changes in a particular natural system. This study goes beyond characterizing estuarial aging in Bolinas Lagoon. Comparisons are made with other estuaries. KEYWORDS: Geomorphology, Socioeconomics geomorphic processes, littoral sediment, sedimentation, tidal inlets, urbanization California, Subregion III, Bolinas Bay Cell Coastal Erosion: The Meaning of a Natural Hazard in the Cultural and Ecological Context AUTHOR(S): Rowntree, Rowan A. SOURCE: Natural hazards: Local, National, Golbal, White, Gilbert F. (editor), Oxford University Press, London, England, 1984, pages 70-79 DATE: 01/01/74 This study was conducted in the small town of Bolinas, ABSTRACT: situated on the bluffs overlooking the Pacific Ocean near San Francisco. The purpose of the paper was to describe how a natural hazard takes on meaning at the individual and community levels of cognition. A table shows the coastal erosion damages and expenditures at Bolinas. KEYWORDS: Coastal Processes, Socioeconomics

coastal erosion, coastal erosion problems, shoreline changes, storm damage California, Subregion III, Bolinas Bay Cell The Movement and Equilibrium of Bedforms in Central San San Francisco Bav AUTHOR(S): Rubin, D. M.; McCulloch, D. S. SOURCE: San Francisco Bay: The Urbanized Estuary, Conomos, J.T., Leviton, A.E., Borson, M. editors, California Academy of Science, San Francisco, CA. pages 92-113 DATE: 01/01/79 ABSTRACT: This paper includes a graph which, along with bedforms and flow information, can be used to estimate sediment-transport rates. Also included are transport directions inferred from sand waves detected by side-scan sonar and a diagram showing surface grain size in the central San Francisco Bay. In Central San Francisco Bay, where tidal currents are strong and the Bay reaches its greatest depth, the sediment is generally sandy. The sandy sediment responds to the local hydraulic regime by forming several distinct types of bedforms. each of which is stable, or in equilibrium, for some discrete range of water KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics estuarine sediment storage, geomorphic processes, grain size, sand bars, tidal inlets California, Subregion III, San Francisco Cell Oregon and Northern California Coastal Reconnaissance AUTHOR(S): Russell, Richard J. Louisiana State University, Baton Rouge, LA, Coastal Studies SOURCE: Institute, Technical Report Number 86, 25 pages DATE: 08/30/70 ABSTRACT: Coastal reconnaissance during April and May, 1970, in Oregon and northern California had the objective of study- ing marine erosional attack resulting from contrasts above and below the water table. Retreat of sea cliffs in the zone of aeration above ground water level is associated with the development of platforms of marine abrasion toward the top of the underlying zone of cementation, where rock is more durable. Pseudo-beach rock in sandv beaches consists of bedrock abraded along the zone of water table fluctuation. Some general comments on coastal landforms are included and some applications are indicated for users of small boats. A new term, "subwash zone," is introduced.

KEYWORDS: Coastal Processes, Geomorphology coastal erosion, coastal structures, geomorphic processes, littoral sediment California, Oregon, Subregion I, Subregion II, Subregion III Late Quaternary Coastal Erosion, Faulting and Marine Terraces in the Trinidad Area, Humboldt County AUTHOR(S): Rust, D. SOURCE: Humboldt State University, Arcata, California, illustration graphs, maps, (GEOREF 1160654 83-19243) DATE: 01/01/82 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, geology, geomorphic processes California, Subregion I, S. Klamath River Reach, Eureka Cell A System for Measuring Bottom Profile, Waves and Currents in the High-Energy Nearshore Environment AUTHOR(S): Sallenger, A. H.; Howard, P. C.; Fletcher, C. H.; Howd, P. A. Marine Geology, Amsterdam, Neatherlands: Elsevier Scientific SOURCE: Publishing Company, Volume 51, pages 63-76 DATE: 02/02/83 ABSTRACT: A new data-acquisition system capable of measuring waves, currents. and the nearshore profile in breaking waves as high as 5 m was developed and field tested at Fort Ord, Monterey Bay, California. Components of the mechanical system are a sled carrying a vertical mast, a double-drum winch placed landward of the beach, and a triangular line system that moves the sled along a shore-normal transect. The profile is measured using an infrared range-finder shooting prisms mounted on the sleds mast as the sled is towed on/offshore. A pressure sensor and bidirectional electromagnetic current meters are mounted on KEYWORDS: Coastal Processes, Geomorphology, Survey beaches, beach profiles, geomorphic processes, nearshore currents, offshore/onshore transport, wave climate California, Subregion IV, S. Monterey Bay Cell Ocean Beach--San Francisco: Beach Face Countours AUTHOR(S): San Francisco City Bureau of Sanitary Engineering SOURCE: City of San Francisco, Bureau of Sanitary Engineering, San Francisco, CA, 1 Vol., unpaged, maps, tables DATE: 01/01/78 Volume contains: I- Variation of beach face contours for ABSTRACT: period from April 7, 1977 to August 21, 1978 at Lincoln, near Riviera Street, Taravel Street, Vicente Street, and II- Contour map of Ocean Beach from Sloat Boulevard to Fulton Street on April 13, 1978.

KEYWORDS: Coastal Processes, Survey beach profiles, maps California, Subregion III, San Francisco Cell Ocean Beach Erosion Conference Golden Gate National Recreation Area, August 1-3, 1978 AUTHOR(S): San Francisco City Bureau of Sanitary Engineering City of San Francisco, Bureau of Sanitary Engineering, San SOURCE: Francisco, CA, unpublished, 1 vol., various pagings, maps, diagrams DATE: 08/01/78 ABSTRACT: This volume contains material pertaining to the 1978 conference, including the following: list of participants, background summary-Ocean Beach (prepared by U.S.A.C.E.), questions and comments, summary of findings. Supporting articles added to the volume include "littoral processes at Ocean Beach, San Francisco", newspaper clippings, initial summary report and staff recommendations of the Northern Central Coast Regional Commission on Construction of a pump station (#128-78); and the agreement establishing the Golden Gate recreation area. KEYWORDS: Coastal Processes, Socioeconomics beach nourishment/dredging, coastal erosion problems, dunes, institutions/planning/mgmt., shoreline changes, shoreline use California, Subregion III, San Francisco Cell Public Access, Land Use Plan Phase AUTHOR(S): Santa Cruz County SOURCE: Santa Cruz County Local Coastal Program, Working Paper, Santa Cruz County, Santa Cruz, CA, 107 pages plus Appendix DATE: 02/01/80 ABSTRACT: Shoreline access assessments and methodology. KEYWORDS: Socioeconomics beaches, environmental constraints, population, property value/land use California, Subregion IV, Santa Cruz Cell Development Plan and Engineering Analysis of Bodega Bay Harbor AUTHOR(S): Sayles, Frederick L. SOURCE: Report to Sonoma County Board of Supervisors and Sonoma Tidelands Harbor and Beach Commission, by Frank B. Sarles, Consulting Civil Engineer, Santa Rosa, California, June 1959 DATE: 06/01/59 ABSTRACT: Development plan and engineering analysis of Bodega Bay and Harbor. Includes population, resource and industry, records of wrecks and rescues, information on tides, sources of shoaling, littoral drift, tidal currents, tributary stream, silting, climatological data, and mention of 37 borings taken

by Corps of Engineers in 1937. Also includes various development plans. Includes wind rose. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics climatology, growth potential/recreation, littoral sediment, sedimentation, tides, wind California, Subregion II, Russian River Cell, S. Russian River Reach, Bodeqa Bay Cell Coastal Sedimentation, Point San Pedro to Miramontes Point, California AUTHOR(S): Sayles, Frederick L. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, HEL-2-15, 105 pages DATE: 08/01/65 ABSTRACT: The distribution and dispersal patterns of sand-size particles are investigated along a portion of the California coast south of San Francisco. The effectiveness of long-term, net littoral transport in the area was evaluated through hydro- dynamic considerations and through considerations of the dispersal patterns of sand. The distribution and dispersal patterns presented are based upon results of the vector analysis of raw heavy mineral data. Four sedimentary provinces have been delineated. One blankets the continental shelf in the study areas and represents pre-modern sediment deposited during the last major regression and transgression of the sea. The remain-KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, grain size, littoral sediment, longshore transport, petrology California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell A Reconnaisance Heavy Mineral Study of Monterey Bay Beach Sediment AUTHOR(S): Sayles, Frederick L. SOURCE: University of California, Berkeley, Hydraulic Engineeering Laboratory, College of Engineering, 20 leaves, illustrations, HEL 2-16 DATE: 08/01/66 ABSTRACT: The study was undertaken to determine if a static equilibrium exists, if there is any significant transport along the shores of the Monterey Bay and to delineate the littoral transport patterns, if any. A heavy mineral study was performed of the sand sized particles collected. KEYWORDS: Coastal Processes, Geomorphology grain size, littoral sediment, longshore transport, mining, offshore/onshore transport

California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Offshore Transport and Dispersion in the California Coastal Region - BLM III, NPS Data Summary. AUTHOR(S): Schacher, G. E.; Spiel, D. E.; Leonard, C. A. SOURCE: U.S. Naval Postgraduate School, Monterey, California, Report NO. NP561-82-004, 98 pages DATE: 05/01/82 ABSTRACT: The third in a series of tracer measurements of overwater transport and diffusion. This report includes the meteorological data obtained aboard the RV/Acania. Analyses of radiosound data to yield mixed layer parameters for mixed layer assessment is also included. KEYWORDS: Oceanography & Meteorology climatology, coastal currents, offshore/onshore transport, wind California A Restudy of Bottom Sediments Near the Entrance of the Golden Gate AUTHOR(S): Schatz, Byron University of California, Davis, Hydraulic Engineering Lab, SOURCE: Institute of Engineering Research, Tech. Rept. HEL-4-3, Davis, California, 1963 DATE: 11/01/63 ABSTRACT: A restudy of selected offshore samples from a 1954 report was initiated in order to determine the existence of zones of heavy minerals or "pay streaks" of heavy mineral accumulation and their relation to median grain diameters of bottom surface sedi- ments. Plots of sample median diameters and contours of equal diameter was established. Detailed investigation of Golden Gate Bar was undertaken. KEYWORDS: Coastal Processes, Geomorphology grain size, hydrographic surveys, littoral sediment, sand bars, tidal inlets California, Subregion III, Bolinas Bay Cell, San Francisco Cell Sediment Sources and Dispersal Patterns of Oregon Continental Shelf Sands AUTHOR(S): Scheidegger, K. F.; Kulm, L. D.; Runge, E. J. Oregon State University, Corvallis, Oregon, Department of SOURCE: Oceanography, Journal of Sedimentary Petrology, Vol 41, No. 4, pages 1112-1120, December 1971 DATE: 12/01/71 ABSTRACT: Heavy minerals of the rivers of Oregon and Northern California indicate major sources of sediments on the Oregon Continental shelf. Sources include the Columbia River Basin, the Oregon Coast Range, the Klamath-Sishiyou Mountains and terrace deposits along the central Oregon Coast. Dispersal

patterns of sand-size sediments showed that the dominant direction of littoral transport has been to the North at least during the past 18,000 years. Sands were transported 170 miles to the north on the continental shelf during the end of the Lake Wisconsin regression and the beginning of the early KEYWORDS: Coastal Processes, Geomorphology coastal currents, geomorphic processes, littoral sediment, longshore transport, petrology, river sediment discharge California, Oregon, Subregion I Geology of the San Francisco North Quadrangle, California AUTHOR(S): Schlocker, J. SOURCE: U.S. Geological Survey Professional Paper 782, 109 pages DATE: 01/01/74 ABSTRACT: An extensive description of the deposits of the San Francisco North quadrangle is given. Color maps of the geology, and bedrock surface and landslide localities with a table of probable causes for landsliding are included. Sediment grain size and petrology of beach sands are used to locate the source of beaches along the Pacific shore of San Francisco. The probable sources of the beach sand and the related onshore dunes are the poorly consolidated Pliocene (5 to 2 million years old) and Pleistocene (2 million to 10,000 years old) Merced Formation, the younger formations along the shore to the south, and the sands of the continental shelf. The sands of the continental shelf probably were deposited by the ancestral Sacramento-San Joaquin River. during the Wisconsin Glaciation KEYWORDS: Geomorphology, Survey beaches, geology, geomorphic processes, grain size, maps, petrology California, Subregion III, Bolinas Bay Cell, San Francisco Cell The Littoral Environment Observation (LEO) Data Collection Program AUTHOR(S): Schneider, Christine USACE Coastal Engineering Research Center, Vicksberg, MS, SOURCE: Coastal Engineering, Technical Aid No. 81-5, 23 pages DATE: 03/01/81 ABSTRACT: The Littoral Environment Observation (LEO) Program provides data on nearshore waves, longshore and rip currents, wind condi-tions, and beach conditions. This report presents guidelines and procedures for LEO site selection and LEO data collection. KEYWORDS: Coastal Processes, Survey beach profiles, longshore current, nearshore currents, shoreline changes, wave climate, wind California

Littoral Environment Observation (LEO) Data Summaries, Northern California, 1968-1978 AUTHOR(S): Schneider, Christine; Weggel, Richard J. SOURCE: USACE Coastal Engineering Research Center, Vicksberg, MS, Miscellaneous Report No. 82-6, 164 pages, tables, diagrams (MR 82-6) DATE: 08/01/82 ABSTRACT: This report briefly describes the Littoral Environment Observation (LEO) Program and its operation in Northern California from 1968 to 1978. А summary of LEO data from 25 northern California sites is presented along with data on breaker height, period, direction, and type; wind speed and direction; longshore current velocity and direction; beach foreshore slope, beach cusps, and rip currents. KEYWORDS: Coastal Processes, Survey beach profiles, longshore current, nearshore currents, shoreline changes, wave climate, wind California, Subregion I, Subregion II, Subregion IV Model for Tidal Circulation Adapted to Monterey Bay, California AUTHOR(S): Schomaker, C. W. SOURCE: U. S. Naval Postgraduate School, Monterey, California, 100 pages (master thesis) DATE: 09/01/83 ABSTRACT: An implicit numerical model for two-dimensional hydrodynamic flow in coastal seas by Leendertse (1967), as modified by Hart (1976), was applied to Monterey Bay. The model was tested against available water-level and current observations. The responses of Monterey Bay to tidal forcing and steadystate winds were simulated. Under tidal forcing it was found to provide reasonable estimates of sea-surface elevations. Currents were not well predicted, indicating that other mechanisms such as wind, density stratification, and oceanic currents generally dominate the forcing of the circulation in Monterey Bay. The model form was found to be potentially suitable for providing real-time tide correctors during a hydrographic KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Oceanography & Meteorology coastal currents, nearshore currents, sea level change, tides California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Surface Current Study of Monterey Bay at Moss Landing, Calif- ornia AUTHOR(S): Schultz, Paul J. SOURCE: San Jose State University, San Jose, CA DATE: 05/01/71 ABSTRACT: Not reviewed.

KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey coastal currents, hydrographic surveys, longshore current, nearshore currents California, Subregion IV, S. Monterey Bay Cell Beach Erosion Control as Related to California AUTHOR(S): Schulz, Walter G. SOURCE: Shore and Beach, Journal of the American Shore and Beach Preservation Association, O'Brien Hall, University of California, Berkeley, CA, V. 24, No. 1 (April) 1956, pages 4-9 DATE: 04/01/56 ABSTRACT: The article outlines administrative agency responsibility for the publicly owned shores off the coast of California. Detailed emphasis is given to responsibility for beach erosion investi- gation and control. Proposed changes in Federal laws are discussed. KEYWORDS: Coastal Processes, Socioeconomics beaches, coastal erosion problems, institutions/planning/mgmt., shore protection California, Subregion I, Subregion II, Subregion IV The Fluvial System AUTHOR(S): Schumm, S. A. SOURCE: John Wiley And Sons, New York, NY, 338 Pages DATE: 01/01/77 ABSTRACT: Sediment yield from streams, etc, not reviewed. KEYWORDS: Coastal Processes, Hydrology & Hydraulics estuarine sediment storage, river-bed sediment, river discharge, river sediment discharge California Direct Measurement of the Davidson Current Off Central Calif- ornia AUTHOR(S): Schwartzlose, Richard A. SOURCE: Journal of Geophysical Research, Richmond, WA, Volume 7, No.6 DATE: 06/01/62 Not reviewed. ABSTRACT: KEYWORDS: Oceanography & Meteorology, Survey coastal currents California, Subregion I, Subregion II, Subregion IV, Subregion V Ocean Currents and Coastal Climates AUTHOR(S): Schwerdt, Richard W. SOURCE: U.S. National Weather Service, Silver Spring, Maryland, Report No. NOAA-74091805-2, 9 pages, included in Mariners Weather Log, Vol 17, N. 6, Ρ. 356-363, November 1973. DATE: 01/01/73 ABSTRACT: Details are given on the following current systems and currents: The Gulf Stream; the Kuroshio Current; the Labrador Current; the Oyashio

Current; the Canary Current; the California Current; the North Atlantic Equatorial Counter- current; and the North Pacific Equatorial Countercurrent. Coastal climates resulting from the interaction of weather elements between land and sea, sea and air are briefly summarized. KEYWORDS: Oceanography & Meteorology climatology, coastal currents California, Subregion I, Subregion II, Surge Study for Monterey Bay and Harbor, California AUTHOR(S): Science Engineering Associates SOURCE: USACE Waterways Experiment Station, under Contract No. DA-22-079 -CIVENG-65-10, by Science Engineering Associates, San Marino, California, 1965 DATE: 07/15/65 ABSTRACT: A computer study of three dimensional oscillations off Monterey Bay; study includes use of wave refraction diagram techniques, use of approximate analytical solutions for seiches in semi- enclosed basins, and use of numerical solutions of the hydro- dynamic equations for seiches in semi-enclosed basins. Also included is an interpretation and correlation of field measurements and theoretical analyses. KEYWORDS: Oceanography & Meteorology coastal currents, nearshore currents, submarine canyons, wave transformation California, Subregion IV, Santa Cruz Cell, AMBAG Oceanographic Survey AUTHOR(S): Scott, Donald A. Prepared for Yoder, Trotter, Orlob & Associates, by Oceanogra-SOURCE: phic Surveys Inc., (OSI #168-2) Santa Barbara, California, April 1973. DATE: 04/01/73 ABSTRACT: This report contains the results of Task IV-3, Oceanographic study of Monterey Bay, for the AMBAG Comprehensive Water Manage- ment Plan. The overall objective, as specified in the Task IV-2 Work Plan, was to provide an understanding of the extent to which Monterey Bay can be used as a receiving basin for waste- water. This report includes information on currents in Monterey Bay with a suggestion for a circulation model; information on areas of Monterey Bay that may be adversely sensitive to increased waste loads; a description of the input to the YTD water quality-ecologic model; and a comprehensive list of references on Monterey Bay oceanography. Copies of data reports KEYWORDS: Oceanography & Meteorology coastal currents, environmental constraints, nearshore currents

California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Governing California's Coast AUTHOR(S): Scott, Stanley SOURCE: University of California, Berkeley, Institute of Governmental Studies, 454 pages DATE: 01/01/75 ABSTRACT: An in-depth book about the roles of various players in determin- ing the policies for California's coastal region, the decision process involved, and the propositions and regulations that are important to policy direction. Three appendices are also included: Background of California's Coastal Legislation; Coastal Definitions and Diagrams; and maps. KEYWORDS: Socioeconomics beaches, environmental constraints, institutions/planning/mgmt., maps, population, property value/land use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V A Statistical Study of Wave Conditions At Five Open Sea Localities Along the California Coast AUTHOR(S): Scripps Institute of Oceanography SOURCE: Scripps Institute of Oceanography, UC San Diego, LA Jolla, CA, STO Wave Report No. 68, Prepared for USACE, Los Angeles District (Contract W-04-353-Eng-1951), 30 pages DATE: 07/01/47 ABSTRACT: Basic data and methods used in determining significant wave height period analysis, evaluation of the accuracy and consistency of forecasting techniques, and limitations of the results. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California Results of Current Measurements with Drogues, 1958-1961 AUTHOR(S): Scripps Institute of Oceanography SOURCE: Scripps Institute Oceanography, UC San Diego, La Jolla, CA, 44 pages, figures DATE: 12/01/62 ABSTRACT: This report discusses the results of current measurements using drift bottles along the California coast. Also has information on circulation, upwelling, periodic variations and nearshore temperature fluctuations, and mean current pattern. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, longshore current, nearshore currents

California, Subregion I, Subregion II, Subregion IV, Subregion V Marine Resources Planning Study - Preliminary Draft AUTHOR(S): Scripps Institute of Oceanography SOURCE: Scripps Institute of Oceanography, Institute of Marine Resources, UC San Diego, La Jolla, CA DATE: 08/01/65 ABSTRACT: This study broadly reviews the relationship of the sea and its resources to the State of California, and its people, and the role of marine resources in California's development. It also evaluates the resource needs of the people that could be met by the sea, the advantages of use of marine resources, the opportunities that may exist for new uses of marine resources, and existing or potential conflicts that arise. It also looks at the state's role with regard to the subject and formulates possible policy measures. KEYWORDS: Socioeconomics environmental constraints, institutions/planning/mgmt., population, urbanization California, Subregion I, Subregion II, Subregion IV, Subregion V California and the Use of the Ocean: A Planning Study of Marine Resources AUTHOR(S): Scripps Institute of Oceanography SOURCE: Prepared for the California State Office of Planning by Scripps Institute of Oceanography, Institute of Marine Resources, UC San Diego, La Jolla, CA, IMR 65-2, various pgngs, tables, graphs DATE: 10/01/65 ABSTRACT: Study of California's coastal resources. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics beaches, climatology, coastal currents, coastal structures, population, shoreline use California Bathymetric Atlas of the Northcentral Pacific Ocean AUTHOR(S): Scripps Institute of Oceanography SOURCE: Scripps Institute of Oceanography, UC San Diego, La Jolla, CA, U.S. Naval Oceanographic Office HO. pub. No. 1302 - S DATE: 01/01/71 ABSTRACT: Atlas designed for naval planners and ocean scientists giving bathymetric detail. Interprets the sea floor relief. KEYWORDS: Geomorphology, Survey geology, maps California, Subregion I, Subregion II, Subregion IV, Subregion V

Design for Optimum Wave Conditions, Crescent City Harbor, Crescent City, California; Hydraulic Model Investigation

AUTHOR(S): Senter, Paul K.; Brasfield, Charles W. SOURCE: USACE, Waterways Experiment Station, Vicksburg, MS, WES, Rept. No. TR-H-68-6, 68 Pages, Appendix A published June 1971, 23 pages DATE: 09/01/68 ABSTRACT: Tests were conducted on a 1:125-scale model of Crescent City Harbor and sufficient adjacent coastline and offshore bathymetry to permit generation of waves and wavefront patterns from all significant directions of wave approach to the harbor. The hydraulic model, equipped with wave-generating and wavemeasuring apparatus, was used to determine the optimum length and location of an extension, or extensions, to the existing breakwater system that would reduce to a tolerable level the present adverse effects of storm waves on navigation and mooring conditions in the harbor. KEYWORDS: Coastal Processes coastal structures, wave climate, wave transformation California, Subregion I, S. Smith River Reach, Klamath River Cell Design of Proposed Crescent City Harbor, California, Tsunami Model AUTHOR(S): Senter, Paul K. SOURCE: USACE Waterways Experiment Station, Vicksberg, MS, Technical Report H-71-2, 33 pages and figures DATE: 02/01/71 Tests were conducted in a 2-ft-wide flume to aid in designing ABSTRACT: а three-dimensional tsunami model of Crescent City Harbor, Calif. The three-dimensional model will be used to investigate the technical feasibility of a levee-type barrier to protect the city from attack by tsunamis. The present investigation was conducted to determine (a) how runup of tsunami waves is affected by model-scale distortion and change in wave periods and (b) an approximate crown elevation needed to prevent all but minor over-topping of the barrier by tsunami waves. This information was required to allow preparation of a preliminary estimate of the cost of the proposed barrier. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, overwash, shore protection, tsunamis, wave climate California, Subregion I, S. Smith River Reach, Klamath River Cell Dredge Disposal Study San Francisco Bay and Estuary AUTHOR(S): Serene, R. J.; Mercer, B. W. SOURCE: USACE San Francisco District, San Francisco, CA, Crystalline Matrix Study, Appendix E, Battelle Contract Number DACW07-73-C-0080, Final Report, 215 pages DATE: 07/01/75

ABSTRACT: Study concerning environmental impact of dredging operations. Investigates the factors associated with dredging, the present system of aquatic disposal, alternative disposal methods, and dredging technology. KEYWORDS: Coastal Processes, Socioeconomics environmental constraints, sedimentation, shoreline use California, Subregion III, Bolinas Bay Cell, San Francisco Cell Smith River Gravel Study AUTHOR(S): Serr, Eugene F.; Scott, Ralph G.; Walker, Tilton; Calzascia, Emil SOURCE: California Department of Water Resources, California Resources Agency, Sacramento, CA, 25 pages DATE: 01/01/74 ABSTRACT: This report discusses sand and gravel deposits along the lower Smith River including the location and extent of the deposits, replenishment rate, extraction methods and quantities, possible alternative sites and economic aspects. Maps and color photo- graphs included. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., maps, mining, river-bed sediment, river sediment discharge California, Subregion I, Smith River Cell, S. Smith River Reach Coastal Engineering Data Network. Presentation to U.S. Army Coastal Engineering Research Board AUTHOR(S): Seymour, Richard J. California Department of Navigation and Ocean Development, SOURCE: Sacramento, CA, 16 pages, appendix, 4 pages DATE: 12/04/75 ABSTRACT: This is a description of the Coastal Engineering Data Network; what it is, its work to date, the approach which was to be used during 1976-77, and the need for this project which is to produce long term wave statistics for the coasts of the U.S. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion I, Subregion II, Subregion IV, Subregion V Coastal Engineering Data Network AUTHOR(S): Seymour, Richard J.; Sessions, M. H.; Wald, S. L.; Woods, A. Ε. SOURCE: University of California, San Diego, Institution of Marine Resources, National Sea Grant College Program, Rockville, MD, Sea Grant Publication 50, 129 pages DATE: 07/01/76

ABSTRACT: A low cost system for automatically measuring and recording coastal wave data is being operated on a prototype basis. It utilizes standard dial up telephone lines to connect remotely located bottom mounted pressure sensors to a central station. The central station is run by a programmed mini-computer to automatically call each remote station in sequence, and take a continuous record of water pressure fluctuations versus time for approximately twenty minutes. These data are recorded on magne- tic tape for processing by the same computer system. Perio- dically, data are processed and significant wave height, and KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California Coastal Engineering Data Network (Semi-Annual Report No.2, July-Dec 76) AUTHOR(S): Seymour, Richard J.; Sessions, Meredith H.; Wald, Stephen L.; Woods, Albert E. SOURCE: University of California, San Diego, La Jolla; Institute of Marine Resources, 153 pp., prepared for Calif Dept of Navigation and Ocean Development, Sacramento, CA and NOAA, Rockville, MD DATE: 01/01/77 ABSTRACT: The Coastal Engineering Data Network is a cooperative program sponsored by the University of California Sea Grant College Program and the California Department of Navigation and Ocean Development. The network is devoted primarily to the collection of long-term wave statistics from a large number of nearshore locations, although the capability to collect other nearshore data exists. The system had been in operation for slightly more than a year when this report was published. During this period approximately 3,000 data runs or three million points were KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California California Coastal Engineering Data Network AUTHOR(S): Seymour, Richard J.; Higgins, Alan L.; Wald, Stephen L.; Woods, Albert E. SOURCE: California Department of Navigation and Ocean Development, Sacramento, CA, Second Annual Report, Jannuary 1977 - December 1977, 123 pages DATE: 12/01/77 ABSTRACT: The primary objective of the program was to collect long-term

coastal wave statistics to provide the knowledge necessary to rationally plan coastal land use, to provide for shoreline erosion protection, and to assist in engineering sediment management projects, coastal structures and navigational facili- ties. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Wave Data-Pacifica Area, California AUTHOR(S): Seymour, Richard J.; et al SOURCE: Scripps Institution of Oceanography, La Jolla, CA, IMR Ref. No. 91.3 prepared for USACE and California Department of Boating and and Waterways DATE: 04/01/82 ABSTRACT: Wave Data including Height, Period, and Sea Swell for the Pacifica area, from January 1981 - December 1981. KEYWORDS: Coastal Processes wave climate California, Subregion III, San Francisco Cell Wave Data, Farallon Islands, California, Wave Buoy AUTHOR(S): Seymour, Richard J.; et al SOURCE: Scripps Institution of Oceanography, La Jolla, CA, IMR Ref. No. 82-8, prepared for USACE and California Department of Boating and Waterways DATE: 04/01/83 ABSTRACT: Collected wave data including height, period, and sea swell for the Farallon Islands Wave Buoy from January 1982 - December 1982 KEYWORDS: Coastal Processes wave climate California, Subregion III, San Francisco Cell Extreme Waves in California During Winter 1983 AUTHOR(S): Seymour, Richard J. California Department of Boating and Waterways, California SOURCE: Resources Agency, Sacramento, CA, 17 pages and maps DATE: 04/21/83 ABSTRACT: A report on extreme storm waves on the California Coast during January, February and March 1983; comparison with other winter season wave climates. KEYWORDS: Coastal Processes, Oceanography & Meteorology storm waves, wave climate California, Subregion I, Subregion III, Subregion IV Coastal Data Information Program, Tenth Annual Report AUTHOR(S): Seymour, Richard J.; Castel, D; Thomas, J. O. SOURCE: Scripps Institution of Oceanography, La Jolla, California, IMR

Reference No. 86-1, Prepared for USACE and California Dept. of Boating and Waterways DATE: 02/01/86 ABSTRACT: This annual report for the Coastal Data Information Program's tenth year of Coastal Wave Data Collection contains condensed wave statistics from a number of instruments along the coasts of Hawaii, California, Oregon, Washington, and North Carolina. This publication also contains reports on the potential sand transport statistics from directional wave stations located along the coasts of southern California and Washington. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Humboldt Bay, Wetlands Review and Baylands Analysis, 3 volumes AUTHOR(S): Shapiro and Associates, Inc. USACE, San Francisco District, under Contract DACW07-78-C-0082 SOURCE: by Shapiro and Associates, Inc., Seattle, WA, Aug 1980 DATE: 08/01/80 ABSTRACT: Volume I contains the summary and findings of the study and includes the following: The study purpose, objectives, and assump- tions; a description of the study area; a discussion of the im- portance of wetlands and wetland types found in the study area; a discussion of typical activities in the study area including impacts and legal/administrative process; and an identification of gaps in knowledge of the area with recommendations for future studies. Volume II is a review and discussion of known existing information on the physical, biological, land use, and sociocultural aspects of the study area. Volume III describes the detailed classification and mapping of habitat types conducted as part of the study. The entire study area was KEYWORDS: Geomorphology, Oceanography & Meteorology, Socioeconomics environmental constraints, geology, river-bed sediment, shoreline changes, tidal inlets, urbanization California, Subregion I, Eureka Cell The Role of Internal Tides in the Nutrient Enrichment of Monterey Bay, California AUTHOR(S): Shea, R. E.; Broenkow, W. W. SOURCE: Science, Washington, D.C.: American Association for the Advancement of Science, Volume 15, No. 1, pages 57-66 Oceanic Abstracts (82-07409) DATE: 01/01/82 ABSTRACT: Semidiurnal internal tides in Monterey Canyon are shown to be

partially responsible for macronutrient enrichment of surface waters in Monterey Bay, California. CTD time series at five stations in the canyon revealed the presence of semidiurnal internal tides with heights between 50 and 120 m. Thermistor data demonstrated an internal tidal bore at the head of the canvon. Data and theory suggest that internal tidal bores may be breaking, due to either shear instability or direct overturning, thereby enriching the immediate area near the canyon head. Transects normal to Monterey Canyon showed a KEYWORDS: Coastal Processes, Oceanography & Meteorology submarine canyons, tides California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell A Comparison of Oceanic Parameter During Upwelling Off The Central Coast of California AUTHOR(S): Shepard, Arthur B. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, masters thesis DATE: 01/01/70 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents, wave climate, wind California, Subregion III, Subregion IV, Subregion V Continued Exploration of California Submarine Canyons AUTHOR(S): Shepard, Francis P. Reports and Papers, Oceanography - 1936, from Transactions of SOURCE: the American Geophysical Union, Seventeenth Annual Meeting, 1936 pages 221-223 DATE: 01/01/36 ABSTRACT: This is a discussion of submarine canyons in California. Faults are discussed briefly. KEYWORDS: Geomorphology geology, petrology, submarine canyons California, Subregion I, S. Spanish Flat Reach Submarine Topography off the California Coast, Canyons and Tectonic Interpretation AUTHOR(S): Shepard, Francis P.; Emery, K. O. SOURCE: Geological Society of America, Special Paper No. 31, Waverly Press, Baltimore, Maryland, 171 pages DATE: 05/28/41 ABSTRACT: Field studies from 1933 thru 1939 are included, as are baythy- metry and nearshore tectonic interpretations of the topography for the entire coast of California. Specific canyons studied include: Coronada, La Jolla and Scripps,

Newport, Pedro Sea Valley, Catalina Redondo, Santa Monica, Dume, Mugu, Hueneme, Santa Cruz, Arguello, Lucia, Sur-Partington, Monterey, Delgada, Mattole and Eel. A section on origin and history of the Canyons is also included. KEYWORDS: Geomorphology, Survey geology, hydrographic surveys, neotectonics, submarine canyons California, Subregion I, Subregion IV, Subregion V Nondepositional Physiographic Environment off the California Coast AUTHOR(S): Shepard, Francis P. SOURCE: Bulletin of the Geological Society of America, Boulder, CO, Volume 52, pages 1869-1886, illustrations DATE: 12/01/41 The evidence for nondeposition of extensive areas off the ABSTRACT: California coast and the possible underlying causes are dis- cussed. Also discussed are the importance of bottom currents and of submarine mud flows in preventing deposition, and the effect of waves, tidal currents, and non-tidal currents. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology geology, littoral sediment, nearshore currents, submarine canyons, tides, wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Longshore-Bars and Longshore-Troughs AUTHOR(S): Shepard, Francis P. SOURCE: USACE, Beach Erosion Board, Washington, D.C., Report No. TM-15, 38 pages (AD-699-393) DATE: 01/01/50 ABSTRACT: The submerged longshore-bars and longshore-troughs which skirt the shores off most sandy beaches are described. The troughs which lie landward of the bars are explained as the result of plunging breakers and the longshore currents which are feeders to rip currents. The bars are thought to be partly the result of the excavation of the troughs and partly due to landward migration of sand outside the breakers and seaward migration from the troughs. The depths of the bars and troughs are shown to be related to wave and breaker heights. The elimination of some bars is seen to be the effect of a long continued period of small waves during which the bar moves landward filling the trough. In many areas the KEYWORDS: Coastal Processes beach nourishment/dredging, longshore current, longshore transport,

offshore/onshore transport, sand bars, wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Composite Origin of Submarine Canyons AUTHOR(S): Shepard, Francis P. SOURCE: Journal of Geology, Chicago, IL: University of Chicago Press, Volume 60 DATE: 01/01/52 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, sea level change, submarine canyons California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Our Changing Coastlines AUTHOR(S): Shepard, Francis P. McGraw-Hill, Inc., New York, N. Y., 1971 SOURCE: DATE: 01/01/71 ABSTRACT: Description of the California coast with documented changes in the coastline. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, coastal erosion problems, geology, shoreline changes, shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V "Internal Waves" Advancing Along Submarine Canyons AUTHOR(S): Shepard, Francis P. Science, Washington, D.C.: American Association for the SOURCE: Advancement of Science, V. 183, (18 Jan) pp 195-197, maps, diagrams DATE: 01/18/74 Patterns of alternating up-and-down canyon currents have been ABSTRACT: traced along the axes of submarine canyons off California. The patterns arrive later at stations nearer the heads of coastal canyons. Where a canyon head is between two islands, the patterns advance down the axis. The propagation speeds of these patterns were estimated as 25 to 88 centimeters per second. Internal waves are the probable explanation. KEYWORDS: Coastal Processes, Geomorphology coastal currents, nearshore currents, submarine canyons California, Subregion IV, Santa Cruz Cell, Sea State and Surf Forecaster's Manual (Western Region) AUTHOR(S): Shields, Gordon C.; Burdwell, Gerald B. SOURCE: U.S. Navy Weather Research Facility, Norfolk, VA 75 pages, Report No. NAVWEARSCHFAC-TP-8-70 (AD-A019373) DATE: 08/01/70

ABSTRACT: The manual was intended as a ready reference for operational techniques of wind wave, swell, and breaker forecasting. KEYWORDS: Coastal Processes, Oceanography & Meteorology storm waves, wave climate, wave transformation, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Late Cenozoic Underthrusting of the Continental Margin Off Northernmost California AUTHOR(S): Silver, Eli A. SOURCE: Science, Washington, D.C.: American Association for the Advancement of Science, Volume 166, No. 3910 pages 1265-1266 DATE: 12/05/69 ABSTRACT: The presence of magnetic anomaly 3, age 5 million years, beneath the continental slope off northern California, is evidence for underthrusting of the continental margin during the late Cenozoic. Folded and faulted strata near the base of the slope attest to deformation. Observed is exactly what is expected from underthrusting. The relative motions of three crustal plates also suggest underthrusting, possibly with a major com- ponent of right-lateral slip. KEYWORDS: Geomorphology geology, geomorphic processes California, Subregion I Large-Scale Thermal Anomalies in the California Current During the 1982-1983 El Nino AUTHOR(S): Simpson, James J. Geophysics research letters, Washington, D.C., Volume 10, No. SOURCE: 10, Oct. 1983, pages 937-940 (reprint), McGowan/Simpson/ Niler R/NP-1-126 DATE: 10/01/83 The large-scale thermal structure of the California Current ABSTRACT: during 1982-1983 shows several anomalous conditions: Warm sea surface temperature anomalies (~1-2C), depression of the thermocline by 50 m or more, and pronounced subsurface warm- ing (~3-4C) relative to the 30-year mean. The subsurface anomaly is much greater than the surface anomaly. These persistent (>6 months) structures, coupled during 1982-1983. The data support the conclusion that the expansion and intensification of high sea levels along the North American coast, show that a major California "El Nino" occured during 1982-83. The data KEYWORDS: Oceanography & Meteorology coastal currents, El Nino, storm surge California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V

El Nino Induced Onshore Transport in the California Current During 1982-1983 AUTHOR(S): Simpson, James J. SOURCE: Geophysical Research Letters, Washington, D.C., 11(3):233-236, March 1984 (paper 4L0243), Reprint available from American Geophysical Union, Washington, D.C., 20009 DATE: 03/01/84 ABSTRACT: Persistent (>9 mo) large-scale positive temperature (3-4C), negative salinity, and positive dissolved oxygen (0.5-1 ml/1) subsurface anomalies characterized the El Ninoinduced onshore transport in the California Current during 1982-1983. These anomalies, characteristic diagrams, and sign reversals in the salinity and oxygen anomalies are consistent only with enhanced onshore transport of subarctic water from the offshore California Current. Onshore transport excludes poleward propagating Kelvin waves as a generation mechanism for the 1982-1983 California El Nino. The data, how-KEYWORDS: Oceanography & Meteorology coastal currents, El Nino California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V The Geology of Carmel Bay, CA AUTHOR(S): Simpson, John P., III SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Masters Thesis, 73 pages (AD-742 919 8/10 817) DATE: 03/01/72 ABSTRACT: Data obtained from rock and sediment samples collected in Carmel Bay were coordinated with seismic and bathmetric information to produce the first geologic map of the area showing the terres- trial geology extended into the bay itself. The map shows a large underwater area of possible contact metamorphism which serves as the source rock for the heavy minerals found along the local beaches. A previously undescribed grandiorite boulder conglomerate was found resting unconformably on the Paleocene Carmelo Series in unlike shores of Stillwater Cove. The conglo- merate is unlike anything else seen in the area. but it is thought to be associated with the Temblor Formation of Miocene age. KEYWORDS: Coastal Processes, Geomorphology, Survey beaches, geology, geomorphic processes, grain size, maps, petrology California, Subregion IV, Carmel River Cell Coastal Estuarine and Nearshore Processes: An Annotated Biblography AUTHOR(S): Sinha, Evelyn; Mc Cosh, Bonnie

SOURCE: U.S. Water Resources Information Center, 218 pages

DATE: 06/01/74 ABSTRACT: One thousand and nine annotated references to the literature on Coastal Estuarine and Nearshore Processes are presented. The order of presentation is alphabetical by name of first author. A subject outline identifies the geologic, geomorphic, metero-logic and oceanographic references which deal with the highly variable interactions in the estuarine and the nearshore zone. Included in the subject outline is the identification of references on models, methods, and instruments used in the study of coastal processes. References to studies in various parts of the world are specified in the geographic outline. KEYWORDS: Coastal Processes, Geomorphology, Survey estuarine sediment storage, longshore current, California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V California's Coastal Wetlands AUTHOR(S): Siowolop, Sana; Albert, Henri University of California, La Jolla, CA, California Sea Grant SOURCE: College Program, Institute of Marine Resources, 39 pages, illustrations, photos 21x22 cm., Sea Grant Report Series #2 DATE: 04/01/79 This is a descussion of California's coastal wetlands. ABSTRACT: Discussed is their management, the conflicts between conservation and homes, recreation, and industry, the responsibility set by laws, and the limits to the wetlands adaptability to human disturbance. KEYWORDS: Geomorphology, Socioeconomics coastal erosion, environmental constraints, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Coastal Erosion Along Monterey Bay AUTHOR(S): Sklavidis, Anastasios I.; Williams, R. Lima-Blancas SOURCE: M.S. Thesis, Naval Postgraduate School, Monterey, CA, 107 Pages DATE: 03/01/85 ABSTRACT: Precise photogrammetric techniques are used to measure cliff recession from 1946 through 1984 in Southern Monterey Bay. A model is developed to predict cliff erosion based on the hypothesis that erosion only occurs when the water level due to combined tides, wave set-up and run-up exceeds the toe of the cliff elevation. The model combines predicted tidal elevations and wave heights. Shallow water wave heights at various locations are calculated bv transforming deep-water directional wave spectra provided by the Fleet Numerical

Oceanography Center. Refraction of the wave energy is responsible for the variability of erosion rates along the shore. The erosion model was calibrated using the spectral wave climatology and aerial photographs covering an 18 vear KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey aerial photography, coastal erosion, dunes, storm surge, wave climate, wave transformation California, Subregion IV, S. Monterey Bay Cell Sedimentation in the San Francisco Bay System, California AUTHOR(S): Smith, Bernard J. SOURCE: Federal Interagency Sedimentation Conference, 59 pages DATE: 02/01/63 A study on the sedimentation platform of the San Francisco ABSTRACT: Bay. Tables and graphs of the data are provided. Includes inflow analyses of the San Joaquin and Sacramento Rivers and Yolo Bypass. Alameda Creek, Napa River, Sonoma Creek, Walnut Creek, Guadalupe and San Franquito Creeks are also discussed. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Survey estuarine sediment storage, littoral sediment, maps, river-bed sediment, river sediment discharge, sedimentation California, Subregion III The Tides of San Francisco Bay AUTHOR(S): Smith, Bernard J. SOURCE: San Francisco Bay Conservation and Development Commission, San Francisco, CA, 42 pages DATE: 06/01/66 ABSTRACT: Study of the tidal action in San Francisco Bay. Tables and figures included. KEYWORDS: Coastal Processes coastal currents, nearshore currents, tidal inlets, tides California, Subregion III, San Francisco Cell Sedimentation Aspects of San Francisco Bay AUTHOR(S): Smith, Bernard J. SOURCE: San Francisco Bay Conservation and Development Commission, 48 pages DATE: 10/01/66 ABSTRACT: Study on the sedimentation characteristcs of San Francisco Bay. The effects of tidal movement, shoaling, and sedimentation reduction and control are discussed. Tables included. KEYWORDS: Coastal Processes institutions/planning/mgmt., mining, sedimentation, tidal inlets, tides California, Subregion III, San Francisco Cell

Origin and Development of Beach Cusps at Monterey Bay, California AUTHOR(S): Smith, Dan H. SOURCE: U.S. Naval Post Graduate School, Monterey, California, Masters Thesis DATE: 09/01/73 ABSTRACT: Beach cusps were observed daily on Del Monte Beach. Measurements were obtained so that a quantitative desceiption of the parameters which affect formation and size of cusps could be determined. A theory of cusp formation was formulated. The events leading to cusp destruction were examined. It was determined that beach cusps are depositional in nature, forming most easily in coarse, loose sediment. Cusp development commences at a rise or area of accretion on the beach. A series of beach cusps forms sequentially rather than simultaniously. The width of beach cusps are a function of wave heights; the larger waves producing wider cusp spacing. Uniform spacing of KEYWORDS: Coastal Processes, Survey beaches, shoreline changes California, Subregion IV, S. Monterey Bay Cell Reconnaissance Report on Coastal Erosion at Fort Ord California AUTHOR(S): Smith, Orson P. SOURCE: Prepared for U.S. Army, 7th Infantry Division and Fort Ord by USACE, Coastal Engineering Research Center, Vicksberg, MS, miscellaneous paper, CERC-83-10, December 1983 DATE: 12/01/83 ABSTRACT: This report defined the physical processes affecting coastal erosion at Fort Ord, California, and described alternative structural and nonstructural solutions to the problems caused by erosion. Solutions are compared for effectiveness, and conclus- ions and recommendations are given. Design recommendations included rubble stone revetments and steel sheetpile bulkheads. KEYWORDS: Coastal Processes coastal erosion, coastal structures, shore protection, storm waves California, Subregion IV, S. Monterey Bay Cell Hydrographic Observations in Elkhorn Slough and Moss Landing Harbor, California, October 1970 to November 1971 AUTHOR(S): Smith, R. E. SOURCE: Moss Landing Marine Laboratories, Moss Landing, CA, Technical Publication 22-3, annual report, part 3 DATE: 07/01/72 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Survey hydrographic surveys, nearshore currents, tidal inlets California, Subregion IV, S. Monterey Bay Cell Physical and Chemical Properties of San Francisco Bay Waters, 1969-1976

AUTHOR(S): Smith, R. E.; Herndon, R. E.; Harmon, D. D.

SOURCE: U. S. Geological Survey, Open-File Report 79-511, 607 pages DATE: 01/01/79 ABSTRACT: Basic data on the physical and chemical properties of San Francisco Bay waters were collected at 36 stations. The Point in South San Francisco Bay to the town of Rio Vista on the Sacramento River. On most of the cruises. vertical profiles of the water were taken at 12 of the 36 stations. The samples were analyzed for physical and chemical characteristics, including: salinity, temperature, light transmission, and suspended-particulat weight. The results of these analysis and the analytical methods used are documented in this report. KEYWORDS: Hydrology & Hydraulics estuarine sediment storage, river sediment discharge California, Subregion III, Bolinas Bay Cell, San Francisco Cell Water Level Variations Along the California Coast AUTHOR(S): Smith, Raymond A.; Leffler, Robert J. SOURCE: Journal of the Waterway, Port, Coastal and Ocean Division, American Society of Civil Engineers, New York, NY, issue 3, 1980, pages 335-348 DATE: 08/01/80 ABSTRACT: Long-term sea level variations relative to land at widely separated locations along the California coast show differences in rates and directions of change. A graphic compilation of 123 years of annual sea level variations at the Golden Gate showed intervals of rise, fall, and little movement relative to land. By referencing the highest water level each year to the tidal datum of MHHW, the maximum expected height of time can be com- puted without the necessity of applying corrections for long-term changes and range variations. The maximum height expected for a 100-yr period, as computed from the observed data at the Golden Gate, is 71 cm above MHHW. San Diego, Los Angeles, San KEYWORDS: Coastal Processes, Oceanography & Meteorology bench marks, sea level change, tides California, Subregion I, Subregion III, Subregion IV GEK Measurements of Surface Currents in Monterey Bay 1971 AUTHOR(S): Smith, Terry SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis DATE: 06/01/72 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell

Flow Duration and High-and Low-Flow Tables for California Streams AUTHOR(S): Smith, Winchell; Hains, Charles F. SOURCE: U.S. Geological Survey, Department of the Interior, in cooperation with California State Department of Water Resources, open-file report, 600 pages, illustrations, and tables DATE: 10/01/61 ABSTRACT: This report tabulates descriptive statistical data for the majority of California streams. Tables include flow for the duration data, the highest mean discharge for consecutive periods of 1,3,7,15,30,60,90,120,150,183, and 273 days and the lowest mean discharge for the similar consecutive periods. Computations for the first two tables are made for each water year ending September 30. The third table is computed for each climatic year beginning April 1. KEYWORDS: Hydrology & Hydraulics river discharge California, Subregion I, Subregion II, Subregion IV Petrology and Geochemistry of the Duzel (Ordovician) and Gazelle (Silurian) Formations, Northern California AUTHOR(S): Snansieng, Sathian SOURCE: Journal of Sedimentary Petrology 41(3), Lawrence, KS: Allen Press, pages 741-751, September 1971, Oceanic Abstracts (72-00754), Bethesda, MD DATE: 09/01/71 ABSTRACT: Not reviewed. KEYWORDS: Geomorphology geology, geomorphic processes, neotectonics, petrology California, Subregion I, Subregion II, Subregion IV Beaches in Northwestern California AUTHOR(S): Snow, David T. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, IER Series, 14 issue 25, 74 pages, illustrations DATE: 08/01/62 ABSTRACT: Forty-two stations on beaches and coastal streams between the Oregon border and Bodega Head, California, were sampled from one to four times each in the years of 1958 to 1960. Grain size and sorting parameters from single samples were proven adequate to distinguish the character of one beach from another, but single samples did not show significant changes with time at individual localities. Groups of stations having sands that were not significantly different, on the basis of single samples, usually fell within the boundaries of geographic units as well.

KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Survey grain size, littoral sediment, river-bed sediment California, Subregion I, Subregion II Coast of California Storm and Tidal Waves Study, Water Resources Center Archives Literature Search AUTHOR(S): Sobey, Cecily SOURCE: Literature Search, Water Resources Center Archives, University of California, Berkeley, Main Collection, for USACE, San Francisco District, California DATE: 01/01/85 ABSTRACT: Provides list of literature sources at the University of California at Berkeley. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Survey storms/floods, storm surge, storm waves, tsunamis, wave climate, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V A Comparison of Oceanic Parameters During the Oceanic Period off the Central Coast of California AUTHOR(S): Soluri, Elroy Anthony SOURCE: U.S. National Technical Information Service, Springfield, VA, Govenrment Reports Announcements, 71(18); 86 September 25, 1971, Oceanic Abstracts (72-02400), Bethesda, MD DATE: 09/25/71 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology coastal currents, hydrographic surveys, storm waves, wave climate, wind California, Subregion II, Subregion III, Subregion IV, Subregion V Beaches and Shoreline Master Plan AUTHOR(S): Sonoma County Planning Commission SOURCE: Sonoma County, California, Sonoma Planning Commission, Santa Rosa, CA, 16 pages, illustrations DATE: 07/12/43 ABSTRACT: The Beach and Shoreline plan was an inventory of the recreational and scenic areas along the Sonoma County Coastline, and a guide for acquisition, development, and protection. KEYWORDS: Socioeconomics growth potential/recreation, institutions/planning/mgmt., population, shoreline use California, Subregion II, S. Navarro River Reach-B, Russian River Cell, S. Russian River Reach

Bodega Bay - A Summary of Improvement Plans and Problems. AUTHOR(S): Sonoma County Planning Commission

SOURCE: Sonoma County, California, Planning Commission, Santa Rosa, CA, 9 leaves, appendices, graphic plates, aerial and ground photos DATE: 04/01/60 ABSTRACT: This report was written to facilitate the execution of major improvements at Bodega Bay. The report presents conclusions in regard to the solution of common problems such as maintaining channels and jetties. KEYWORDS: Socioeconomics aerial photography, coastal structures, institutions/planning/mgmt., shoreline use California, Subregion II, Russian River Cell, S. Russian River Reach, Bodega Bay Cell Coastal Zone Bibliography: Citations to Documents on Planning, Resource Management and Impact Assessment AUTHOR(S): Sorensen, Jens; Demers, Marie Scripps Institute of Oceanography, Institute of Marine SOURCE: Resources, UC San Diego, La Jolla, CA, (Sea Grant Publication No. 8, Rockville, MD), 89 pages DATE: 08/01/73 ABSTRACT: The computer automated bibliography presented in this report was developed as a support program to the Sea Grant research project. The general objective of the project was to develop methods to assess the environmental and socioeconomic impacts of coastal development and resource use. The primary impact assessment method which was developed is the construction of networks and checklists to systematically identify the potential environmental and socioeconomic impacts that may be generated by a proposed coastal development or resource use. The biblio- graphy was intended to provide documentation of actual KEYWORDS: Socioeconomics, Survey environmental constraints, institutions/planning/mgmt., shoreline use, urbanization California, Subregion I, Subregion II, Subregion IV Coastal Erosion Hazard in the United States: A Research Assess- ment AUTHOR(S): Sorensen, John H.; Mitchell, J. K. SOURCE: University of Colorado, Institute of Behavioral Science, Boulder, CO, 65 pages, illustration, Monograph #NSF-RA-E-75-014 DATE: 01/01/75 ABSTRACT: The assessment of research on natural hazards provides a comprehensive basis for judging the probable social utility of allocation of funds and personnel of various types of research on natural hazards and stimulates a more systematic appraisal of research needs. Chief hazards

investigated relate to coastal erosion, flood, landslide, tsunami, windstorms, etc., and impact estimates are made in terms of property loss, deaths, and social impact. KEYWORDS: Socioeconomics coastal erosion, coastal erosion problems, institutions/planning/mgmt., population, California, Subregion I, Subregion II, Subregion IV, Subregion V Recession of Marine Terraces - With Special Reference to the Coastal Area North of Santa Cruz, CA AUTHOR(S): Sorensen, Robert M. SOURCE: Proceedings, 11th Conference on Coastal Engineering, London, England, American Society of Civil Engineers, New York, NY, pages 653-670 DATE: 09/01/68 The concept "wave base" (or "surf base"), i.e. the maximum ABSTRACT: depth below mean sea level at which shoaling waves will effectively erode the ocean bottom leading to the recession of a shoreline, is discussed. Also, past and present opinions as to the magnitude of wave base in general and specifically in the area near Santa Cruz, California, and the variables controlling this phenomenon are presented. Cliff recession rates are presented along with а review of sea level history, local geology and wave climate. KEYWORDS: Coastal Processes, Geomorphology, beach profiles, geology, geomorphic processes, sea level change, shoreline changes, wave climate California, Subregion III, Subregion IV, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell, S. Half Moon Bay Reach-B, Santa Cruz Cell The Tsunami of March 28, 1964, as Recorded at Tide Stations AUTHOR(S): Spaeth, M. G.; Berkman, S. C. U.S. Department of Commerce, Environmental Science Services SOURCE: Administration, Technical Report, Coast and Geodetic Survey Bulletin No. 33, 86 pages, tables DATE: 07/01/67 ABSTRACT: The tsunami generated by the Prince William Sound Earthquake of March 28, 1964 (G.M.T.), was the largest since the 1960 Chilean tsunami. Seiche action did damage as far away as the Gulf of Mexico. This report contains 105 reproductions of tide curves showing the tsunami, and 8 curves showing oscillations induced by the long-period seismic waves-6 in the Gulf of Mexico and 2 at Arkansas dam sites. A brief history of the Seismic Sea Wave Warning

System and a report of its operation during the tsunami warning action are included. Fatalities totaled 122, and over \$104 million in damages resulted. These are tabulated together with detailed data on wave heights and arrival times at various KEYWORDS: Coastal Processes, Survey storm damage, tides, tsunamis, wave climate, wave transformation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V A Preliminary Investigation of the Heavy Mineral Sites of the Coastal Rivers and Beaches of Oregon and Northern California AUTHOR(S): Spigai, J. J. Oregon State Univeristy, Corvallis, OR, School of Science, SOURCE: Dept. of Oceanography, reprints, 17 pages, two figures, two tables, two appendices, 21 references, Oceanic Abstracts (69-06961) DATE: 02/01/69 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology beaches, geology, geomorphic processes, petrology, river-bed sediment California, Subregion I, Subregion II, Subregion III A Gravimetric Survey of the Santa Cruz-Ano Nuevo Point Continental Shelf and Adjacent Coastline AUTHOR(S): Spikes, Clayton H. SOURCE: U.S. Naval Postgraduate School, Monterey, California, Master's Thesis, 114 pages DATE: 09/01/73 Gravity data was collected from 82 seafloor and 41 land ABSTRACT: stations in a 334 sq km area between Santa Cruz and Ano Nuevo. A complete Bouquer anomaly map is depicted and subsequently tied in with a previous survey of northern Monterey Bay. Isoline gradient analysis supports the concept that complete Bouguer anomally profiles can be used to map granitic basement displacements. Complete Bouguer anomaly cross-sections are compared with corre- sponding profiles of seismic, well core, sea surface gravity, and magnetic data. Correlation is exhibited between these pro- files and the Palo Colorado-San Gregorio fault zone. KEYWORDS: Geomorphology, Survey geology, geomorphic processes California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Factors Affecting Gully Formation and Distribution in Coastal San Mateo County, California

AUTHOR(S): Spreiter, T. A. SOURCE: Stanford University, Stanford, CA, Master's Thesis, GEOREF (1090011 82 - 14158) DATE: 01/01/79 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, geomorphic processes, river discharge, watersheds California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell, S. Half Moon Bay Reach-A Observations on Cumulative Bottom Drift in Monterey Bay Using Seabed Drifters AUTHOR(S): Squire, James L., Jr. Limnology and Oceanography, Lawrence, Kansas: Allen Press, SOURCE: Volume 14, pages 163-167 DATE: 01/01/69 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Surface Currents as Determined by Drift Card Releases over the Continental Shelf off Central and Southern California AUTHOR(S): Squire, James L., Jr. SOURCE: National Marine Fisheries Service, Seattle, Washington and La Jolla, California, Report No. NOAA-TR-NMFS-SSRF-718; NOAA-78022203, 21 pages DATE: 12/01/77 ABSTRACT: The purpose of this study was to develop information on the drift patterns to which surface planktonic forms are subjected over the continental shelf of the west coast of the United States. The general direction of surface drift was determined and is compared with wind velocity during the survey period to expose any general relationship between wind direction and inshore surface currents. Johnson and Squire (1970) published the results found along the northwestern coast of the United States. This paper covers the central area from Point Arena to Point Sur, Calif., and the southern area from Point KEYWORDS: Oceanography & Meteorology coastal currents, longshore current, maps, wind California, Subregion II, Subregion III, Subregion IV, Subregion V The Politics of California Coastal Legislation: The crucial Year, 1976 AUTHOR(S): Squire, Peverill; Scott, Stanley SOURCE: Squire Peverill and Stanley Scott, University of California,

Berkeley,

104 pages DATE: 01/01/84 ABSTRACT: Not reviewed. KEYWORDS: Socioeconomics institutions/planning/mgmt., population, shoreline use, shore protection, storm damage, urbanization California, Subregion I, Subregion II, Subregion IV, Subregion V The Natural Resources of Bodega Harbor AUTHOR(S): Standing, Jon; Browning, Bruce; Speth, John W. SOURCE: California Department of Fish and Game, Sacramento, CA, Coastal Wetlands Series, No. 11, 183 pages, appendices DATE: 05/01/75 ABSTRACT: The purpose of this report was to document the natural resources of Bodega Harbor, the use they receive, and the problems that affect those resources. Bodega Harbor is unique among the coastal wetlands remaining on the coast of California. A natural embayment formed by the San Andreas Fault, the harbor is the only fishing port between San Francisco and Noyo Harbor, in Mendocino County, and is extremely important for its marine- oriented uses and commercial fish-related facilities. In addition to its significance as a port. Bodega Harbor has a large variety and quantity of marine, wetland and upland habitats. These habitats support a variety of wildlife and invertebrates and make the harbor an extremely interesting and KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics coastal structures, dunes, environmental constraints, geology, tidal inlets, watersheds California, Subregion II, Russian River Cell, S. Russian River Reach, Bodeqa Bay Cell Genesis and Geologic Antiquity of the Monterey Submarine Canyon AUTHOR(S): Starke, George W. Geological Society of America, Boulder, CO, Bulletin, Volume SOURCE: 67, No. 12 DATE: 01/01/56 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Polygenetic Origin of Monterey Submarine Canyon AUTHOR(S): Starke, George W.; Howard, Arthur D. SOURCE: Geological Society of America, Boulder, CO, Bulletin, Volume 79,

Number 7, pages 813-826, illustrations, tables, 1968, GEOREF (472585 68-0189ZN) DATE: 01/01/68 ABSTRACT: In 1956, Starke reported the presence of a deep buried canyon inland from, and aligned with, the head of the Monterey Submarine Canyon. In this 1968 study, cumulative well records, gravity surveys, and field investigations strongly suggest that the buried ancestral canyon was eroded by fluvial processes, and that the present submarine canyon originated, at least in part, by the fluming out of the ancestral canyon by dominantly submarine processes. The presence of the ancestral canyon provides additional information on the deformational history of the central California coast. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, petrology, sea level change, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell California Nearshore Processes, ERTS-A AUTHOR(S): Steller, David D.; Pirie, Douglas M. SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 01/01/78 ABSTRACT: The detectability of many nearshore processes from ERTS is made possible due to suspended sediment present in coastal waters. From viewing and analyzing the California coastal imagery, the overall current patterns and their changes were evident. The original objectives of detecting currents, sediment transport, estuaries and river discharges were expanded to include the uses of ERTS information in operational problems of the U.S. Army Corps of Engineers. KEYWORDS: Coastal Processes, Hydrology & Hydraulics coastal currents, nearshore currents, offshore/onshore transport, remote sensing, river sediment discharge California, Subregion I, Subregion II, Northeast Pacific Geophysical Survey (RP-1-OC-71) AUTHOR(S): Stevens, H. R., Jr. U.S. National Oceanic and Atmospheric Administration, SOURCE: Department of Commerce, Washington, D.C., Technical Report #ERL-232-POL-10 DATE: 01/01/72 ABSTRACT: This report summarizes the work undertaken by scientific person- nel aboard the NOAA Ship Oceanographer in the spring of 1971. Over 17,000 nautical miles of bathymetry, magnetic, and gravity data were recorded during the cruise. From this data a profile of magnetic and gravity anomalies with related

bathymetry has been produced. A major part of the work involved continuous seismic profiling. From this record and the other geophysical measurements, additional information pertaining to the oceanic crust in the Northeast Pacific Ocean was acquired. Four separate regions were investigated. They were а region of abys- sal hills between the Murray and Mendocino fracture zones, the Chinook trough, the northern Gulf of Alaska, and the Queen KEYWORDS: Geomorphology geology, hydrographic surveys, submarine canyons California, Subregion II A Study of Currents in Southern Monterey Bay AUTHOR(S): Stevenson, Connelly D. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 67 pages DATE: 01/01/64 ABSTRACT: Measurements of surface and subsurface water circulation in shallow water in the extreme southern end of Monterey Bay were made by tracking droques from the beach. A computer program in- cluded in the appendix was developed to transform the raw survey data into drogue courses and speeds, and to plot their trajecto- ries. Analysis of drogue tracks showed a predominance of shore- ward flow. Interpretation of the effect of wind and sea condi-tions upon the observed water transport revealed a close depen- dence upon winds above five knots, in contrast to an apparent lack of dependence upon tidal variations and waves. Water motions in general responded to changes in the character of the wind with very little time lag; the lag increasing slightly with KEYWORDS: Coastal Processes, Oceanography & Meteorology nearshore currents, tides, wave climate, wind California, Subregion IV, S. Monterey Bay Cell Computation of the Littoral Regime of the Shore of San Francisco County, California, by Automatic Data Processing Methods AUTHOR(S): Street, Robert L.; Mogel, Theodor; Perry, Bryne SOURCE: USACE, San Francisco District, San Francisco, CA, prepared under Contract No. DACW07-68-C-0054; Final Report, 20 pages, charts, illustrations, tables, maps, not published DATE: 01/01/69 ABSTRACT: This was a study of the littoral regime of a section of the coastline of the City and County of San Francisco, California, from the Golden Gate Bridge to Mussel Rock, south of the south- erly boundary of the City and

County of San Francisco. The study includes a complete refraction analysis of all applicable deepwater wave directions and periods; determination of the location of wave breaking; application of 12 monthly tables and an annual table of digitized deep-water wave characteristics; calculation of alongshore energy and potential littoral transport; and tabulation of shallow-water wave direction and KEYWORDS: Coastal Processes longshore transport, wave climate, wave transformation California, Subregion III, San Francisco Cell, San Francisco Cell Land and Water Resources, Monterey County; District Report AUTHOR(S): Stump, Federick E. SOURCE: California Department of Water Resources, Sacramento, CA, 34 pages, map: 28 cm DATE: 07/01/84 ABSTRACT: This report appraises land and water development in Monterey County and includes discussions of urban and agricultural water use, seawater instrusion into ground water basins, present and future water supplies, and water supply management problems. Information presented in this report is excerpted from the California Department of Water Resources' Bulletin 160-83, "The California Water Plan", dated December 1983. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, institutions/planning/mgmt., population, precipitation, urbanization, watersheds California, Subregion IV, Subregion V, Relationship Between Predicated and Observed Tides at Point Reyes Coast Guard Life Boat Station Point Reyes, California AUTHOR(S): Stump, R. S.; Johnson, J. W. SOURCE: University of California, Berkeley, 9 leaves, tables, HE-116-1 DATE: 10/09/44 ABSTRACT: This report checked the accuracy of the Point Reyes tide as predicted from U.S.C. and U.S. tide tables. This was done by a series of observations made at Point Reyes Coast Guard Life Boat Station in 1944. KEYWORDS: Oceanography & Meteorology tides California, Subregion II, Subregion III, Point Reyes Cell, Drakes Bay Cell Summary of Observed Data From Humboldt Bay AUTHOR(S): Stump, R. S. SOURCE: University of California, Berkeley, Department of Engineering, Engineering Research Pojects, 3 leaves, HE-16-40 DATE: 12/11/44 ABSTRACT: Summary of observed data from Humboldt Bay which includes the following elements: breaker height, number of lines of breakers, distance

between breakers, period, direction, littoral current, wave characteristics, wind, and tide. KEYWORDS: Coastal Processes, Survey wave climate, wave transformation California, Subregion I, Eureka Cell Summary of Observed Data From Point Reyes, July, August, September 1944 AUTHOR(S): Stump, R. S. SOURCE: University of California, Berkeley, Department of Engineering, 4 leaves, illustrations, (HE-116-39) DATE: 12/11/44 ABSTRACT: This is a summary of observed data from Point Reyes in July, August, September 1944. Data includes the following elements: breaker height, average number of breakers, direction of chop and swell, wave period littoral current, wave characteristics, wind tide, and angle of breaker. KEYWORDS: Coastal Processes beaches, tides, wave climate, wave transformation, wind California, Subregion II, Subregion III, Point Reyes Cell, S. Point Reyes Reach, Drakes Bay Cell Wave Forecasts for Fort Ord California, University of California at Berkeley, College of Engineering. AUTHOR(S): Stump, R. S. SOURCE: University of California, Berkeley, College of Engineering, HE-116-46 DATE: 01/03/45 ABSTRACT: This is a description of how forecasts are made for Fort Ord, California. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, Subregion IV, S. Monterey Bay Cell Forecast and Observed Surf Characteristics for July, August, September 1944 AUTHOR(S): Stump, R. S. SOURCE: University of California at Berkeley, College of Engineering, Fluid Mechanics Laboratory, 52 leaves, illustrations, tables, photos (HE-116-52) DATE: 02/02/45 ABSTRACT: In July of 1944 a project dealing with forecasting breaker heights for the California Coast was initiated. The objectives were to check what had been done toward developing a satisfactory forecasting system for waves and breakers and to supply additional data on surf conditions. Three localities were used for observations: Point Reyes, Point Arena, and Humboldt Bay. KEYWORDS: Coastal Processes, Oceanography & Meteorology

aerial photography, beaches, nearshore currents, wave climate, wave transformation California, Subregion I, Subregion II, Eureka Cell, Navarro River Cell, Point Reyes Cell Comparison of Forecast and Observed Surf Conditions, California Coast, from October 1944 through March 1945 AUTHOR(S): Stump, R. S. SOURCE: University of California, Berkeley, College of Engineering, Contract No 16290, HE-116-95; Engineering Research Project - BUSHIPS, unpaged, typed manuscript, photos, tables, diagram maps DATE: 04/21/45 During the period of October 1944 through March 1945, wave ABSTRACT: and breaker forecasts were made for five stations along the Calif. coast: Humboldt Bay, Point Arena, Point Reyes, Fort Ord, and Coronada. The purpose of these forecasts was to determine where errors in the forecasting procedures were apparent and to form a more detailed basis for the examination of these discrepancies. Observations of breaker height and period were made from each of the stations for which forecasts were regularly made. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation, wind California, Subregion I, Subregion II, Subregion IV, Eureka Cell, Navarro River Cell, Point Reyes Cell, S. Monterey Bay Cell Comparison of Forecast and Observed Waves from Two Pacific Storms AUTHOR(S): Stump, R. S.; Hermonson, R. T. University of California, Berkeley, Department of Engineering, SOURCE: Fluid Mechanics Laboratory. 11 leaves, illustration tables, weather maps, photos, (HE-116-24) DATE: 07/26/45 ABSTRACT: This report presents an analysis of two situations in which waves reached the coast in advance of the forecast time of arrival. The storms causing the waves were analyzed, and the shore observations clearly identify the arrival of the two sets of waves. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, Subregion I, Subregion II, Subregion IV, Subregion V Biweekly Comparison of Observed and Forecast Surf Conditions for the California Coast, Number VI AUTHOR(S): Stump, R. S.

SOURCE: University of California, Berkeley, Fluid Mechanics Laboratory, one leaf, tables (HE-116-162) DATE: 08/21/45 ABSTRACT: Biweekly reports of the comparison of forecast and observed breaker heights & periods were begun on the first of May, 1945. This was the sixth of these summaries covering the period from July 16 to July 31, 1945. Tables I to V give the comparison of observed and forecast surf conditions. Graphs I to IV have plotted the observed and forecast periods and breaker heights. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Biweekly Comparison of Forecast Surf Conditions for the California Coast number VII, August 1-15, 1945. AUTHOR(S): Stump, R. S. SOURCE: University of California, Berkeley, College of Engineering, Fluid Mechanics Laboratory, 11 leaves, tables, HE-116-687 DATE: 09/24/45 ABSTRACT: Bi-weekly reports of the comparison of forecast and observed breaker heights and periods were begun on the first of May 1945. Tables I to V give the comparison of observed and forecast surf conditions. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Bi-weekly Comparison of Observed and Forecast Surf Conditions for the California Coast. Number VIII, August 16-31, 1945 AUTHOR(S): Stump, R. S. SOURCE: University of California, Berkeley, College of Engineering, Fluid Mechanics Laboratory, 1 leave, 5 tables, HE-116-169 DATE: 09/24/45 ABSTRACT: Bi-weekly reports of the comparison of observed and forecast breaker heights and periods were begun on May 1, 1945. This is the eighth of these summaries, from August 16 to August 31, 1945. Tables I to V give the comparisons of observed and forecast conditions. Graphs I-IV have plotted the observed and forecast periods and breaker heights. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V

Summary of Surf Observations and Forecasts of Selected Storms in the North Pacific August 1944-45. AUTHOR(S): Stump, R. S. SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 2 Volumes, Technical Report HE-116-203 DATE: 01/03/46 ABSTRACT: This report presents the results of an investigation of the methods of forecasting surf conditions on the California coast. Forecasts of surf conditions were made for about fifty cases from July 1944 to August 1945. In each case there was a distinct change in surf conditions when the waves arrived. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, Subregion I, Subregion II, Subregion IV, Subregion V Surf Forecasts for Humboldt Bay, Table Bluff Station AUTHOR(S): Stump, R. S. SOURCE: University of California, Berkeley, College of Engineering, Fluid Mechanics Laboratory, 4 leaves, tables, (HE-116-199) DATE: 02/21/46 ABSTRACT: From December 1, 1945 to January 31, 1946, surf hindcasts were made for Humboldt Bay, based on weather maps prepared at Navy Weather Central San Francisco. Table I gives the deep water wave height, period, and direction, and the breaker height for the 3 largest wave trains present. Table II gives the predicted arrival of these wave trains. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, Subregion I, Eureka Cell Surf Observations and Photographic Data Obtained by Field Party and Comparison with Hindcasts; Table Bluff Station December 1945 - January 1946 AUTHOR(S): Stump, R. S.; Bascom, W. N. SOURCE: University of California, Berkeley, Department of Engineering, Hydraulic Engineering Laboratory, 18 leaves, illustration, table, folding plates, HE-116-205 DATE: 05/16/47 ABSTRACT: This report describes the operation of the field party while at Table Bluff and presents the data obtained. It also contains an analysis of the oblique daily observational photographs of the surf zone and shows a comparison of this data with hindcasts made for the same period. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey aerial photography, beach profiles, wave climate, wave transformation California, Subregion I, Eureka Cell

Geological Hazards Along the Coast South of San Francisco AUTHOR(S): Sullivan, Raymond SOURCE: California Geology, California Division of Mines and Geology, Sacramento, CA, February 1975, Volume 28, No. 2, pages 27-36 DATE: 02/01/75 ABSTRACT: The article contains discussions of urban development between Mussel Rock and Thornton Beach; a discussion of geologic structures such as fault and late Cenzoic stratigraphy; coastal erosion affecting the cliffs; and earthquake hazards along the coast of Southern San Francisco County and Northern San Mateo County. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics coastal erosion, geology, neotectonics, precipitation, urbanization California, Subregion III, San Francisco Cell Littoral Environment Observation Program in California AUTHOR(S): Szuwalski, Andre USACE, Coastal Engineering Research Center, Vicksberg, MS, SOURCE: Miscellaneous Paper, No. 2-70, 14 pages, figures, appendices DATE: 02/01/68 ABSTRACT: The littoral variables collected under the LEO program included the folowing beach characteristics: foreshore slope, width and elevation of berm. presence of cusps and samples of the sedi- ments. The beach material was analyzed for mean and median diameter, standard deviation, skewness, and kurtosis. State of the sea variables include tide level, wave height, wave period, wave direction, type of breaker, direction and velocity of littoral currents, presence of rip currents, and water temp- erature. Wind velocity and direction are recorded, and pano- ramic photographs are obtained. KEYWORDS: Coastal Processes beaches, beach profiles, grain size, California, Subregion I, Subregion II, Subregion IV, Littoral Environment Observation Program in California, Prelimi- nary Report, February - December 1968 AUTHOR(S): Szuwalski, Andre SOURCE: USACE, Coastal Engineering Research Center, Vicksberg, MS, 242 pages, photos, graphs, tables, Miscellaneous Report 2-70 DATE: 02/01/70 ABSTRACT: This report describes the Littoral Environment Observation (LEO) Program and assembles in one paper the data collected under the program from February through December 1968. The littoral variables collected under the LEO program include the following beach characteristics: foreshore slope, width and

elevation of berm, presence of cusps and samples of the sediments. The beach material is analyzed for mean and median diameter, standard deviation, skewness. and kurtosis. State of the sea variables include tide level, wave height, wave period, wave direction, type of breaker, direction and velocity of littoral currents, presence of rip currents, and water temperature. Wind KEYWORDS: Coastal Processes beaches, beach profiles, grain size, nearshore currents, wave climate, wind California, Subregion I, Subregion II, Subregion IV Bibliography of Publications of the Coastal Engineering Research Center and the Beach Erosion Board AUTHOR(S): Szuwalski, Andre; Clark, Linda SOURCE: USACE, Coastal Engineering Research Center, Vicksberg, MS, 250 pages DATE: 12/01/81 ABSTRACT: This bibliography supersedes the June 1980 (AD Number A087749), bibliography of the same title. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal erosion problems, coastal structures, longshore transport, shore protection, wave climate, wave transformation California Bibliography of Publications prior to July 1983 of the Coastal Engineering Research Center and the Beach Erosion Board AUTHOR(S): Szuwalski, Andre; Wagner, Stephen SOURCE: USACE, Coastal Engineering Research Center, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS, March, 1978 DATE: 03/01/84 ABSTRACT: This bibliography supersedes the Bibliography of Publications of the Coastal Engineering Research Center and Beach Erosion Board by Andre Szuwalski and Linda Clark, dated December 1981. It is a listing of publications issued by the Coastal Engineering Research Center (CERC) and its predecessor, the Beach Erosion Board, before 1 July 1983, when CERC became part of the U.S. Army Engineer Waterways Experiment Station. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal erosion problems, coastal structures, longshore transport, shore protection, wave climate, wave transformation California Oceanographic Studies to Support the Assessment of Submarine Disposal at Sea. Volume II, Appendices AUTHOR(S): Talbert, D.M. SOURCE: Sandia National Labs, Albuquerque, NM; Sponsor: U.S. Department of

Energy, Washington, D.C., 620 pages DATE: 09/01/82 ABSTRACT: Volume II comprises 22 appendices: Identification of Generic Study Areas: Eastern North Pacific Ocean (Appendix A); Summary of Historical Oceanographic and Climatological Data for West Coast Potential Disposal Sites W-N and W-S (Appendix C); Char- acteristics of Bottom Sediments collected from area W-N During R/V Thompson Cruise TT-141, August 1979 (Appendix F); Oceanographic Studies through December 1981 at Pacific Site W-N (Appendix G); Geochemical Investigation of Sediment and Pore Water Samples from the Northeast Pacific Ocean, off the Coast of California (Appendix H); LLWODP Geotechnical Survey; Doppler Penetrometer Data (Appendix I); Data Report for Current Meters KEYWORDS: Oceanography & Meteorology, Survey climatology, coastal currents, environmental constraints, petrology California, Subregion I, Subregion II, Subregion IV, Subregion V An Analysis of the Concentrations of Heavy Metals in Monterey Harbor Utilizing the Methods of Atomic Absorption Spectrophoto- metry and Polarography AUTHOR(S): Tanner, J. W. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 41 pages, Water Resources Abstracts (049227 W72-14964), Minneapolis, MN: Environmental Hydrology Corporation DATE: 12/01/71 Ecological base lines in an undisturbed area off Del Monte ABSTRACT: Beach were established so that environmental changes brought about by a proposed breakwater construction could be evaluated. As part of this study, water samples were taken at selected stations and analyzed for the heavy metals cobalt, copper, iron, lead, and nickel by Atomic Absorption Spectroscopy and by Polarography. The results obtained by these two methods are compared and discussed. The heavy metals in the sea water were concentrated and removed using the Ammonium Pyrrolidine Dithiocarbamate KEYWORDS: Coastal Processes beaches, environmental constraints California, Subregion IV, S. Monterey Bay Cell Bibliography of Marine Geology and Oceanography, California Coast AUTHOR(S): Terry, Richard D. SOURCE: California Department of Natural Resources, San Francisco, CA, Division of Mines, Special Report 44, 131 pages DATE: 08/01/55 ABSTRACT: The topics covered by this bibliography include: sedimentation, submarine topography, beach erosion and its control, marine engineering

problems, coastal sand dunes, tideland petroleum developments, marine geophysics (including seismology and tsunamis), salt water intrusion, physical and chemical oceanography. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology coastal erosion problems, dunes, mining, sedimentation, submarine canyons, tsunamis California, Subregion I, Subregion II, Port Facilities and Potential AUTHOR(S): Thomas J. Murray and Associates SOURCE: Crescent City Harbor District, Crescent City, CA, Board of Harbor Commissioners, 126 Pages DATE: 05/01/63 ABSTRACT: A report on the economic feasibility of Crescent City port improvements conducted during 1962. This report includes an analysis of conditions and problems confronting those who use the port facilities, and outlines improvements which were deemed necessary to assist in alleviating or correcting some of these conditions and problems. The report also outlines the commercial potential of the port and includes an analysis of the economic benefits that could accrue to the public following the construction of proposed improvements. KEYWORDS: Socioeconomics coastal structures, environmental constraints, maps, remote sensing, shoreline use California, Subregion I, S. Smith River Reach Sediment Grain-Size Distribution in San Francisco Bay, California: January, February, and August 1973 AUTHOR(S): Thompson, Janet SOURCE: U.S. Geological Survey, Menlo Park, CA, Open-File Report 81-1332, 34 pages DATE: 01/01/81 ABSTRACT: Sediment grain size data for San Francisco Bay are presented for Van Veen grab samples taken at 43 stations in January and February 1973 and at 42 of the same stations in August 1973. Mean and median grain size, sorting, skewness, kurtosis, and size-class percentages and ratios are presented for each station. The coarsest sediment in the study area, 0.25 mm mean diameter, was found at the opening to the bay where more than 95 percent of the bed material is sandsize. The seasonal changes in grain size were minimal, with greater variation occurring in the extremities of the bays.

KEYWORDS: Coastal Processes, Geomorphology, deltas, estuarine sediment storage, grain size, river-bed sediment, sedimentation, tidal inlets California, Subregion III, Bolinas Bay Cell, San Francisco Cell Recent Sediments of Humboldt Bay, Eureka, California AUTHOR(S): Thompson, Robert W. SOURCE: Humboldt State University, Arcata, CA, unpublished Final Report, PRF #799-G2, 1971 DATE: 01/01/71 ABSTRACT: This study was undertaken with the objective of categorizing and mapping the distribution of various types of surface sediments in Humboldt Bay, and relating the distribution of these sediments to their sources and to the physical and biological processes active within the bay. Specific purposes of the study were to provide information essential for sound conservation practices to be employed in future development of the bay and as a contribution to our general knowledge of the processes and products of bay-estuarine sedimentation in various geologic settings, a knowledge required for interpretation of the geologic record in other areas. KEYWORDS: Coastal Processes, Geomorphology, estuarine sediment storage, geology, maps, petrology, river-bed sediment, tidal inlets California, Subregion I, Eureka Cell Swell and Storm Characteristics From Coastal Wave Records AUTHOR(S): Thompson, Warren C. U.S. Naval Postgraduate School, Monterey, CA; Proceedings of SOURCE: the 12th Coastal Engineering Conference, September 13-18, 1970 Washington, D.C., ASCE . New York, NY, Pages 33-52 DATE: 09/13/70 ABSTRACT: Records from a wave sensor at Monterey, California yielded a linear frequency shift associated with each arriving swell train from which the origin time and travel distance of the swell was computed. Surface weather maps were used to find the source and the deep-water arrival direction of the individual waves compos- ing wave groups. Five of the swell sets originated in North Pacific storms advancing toward Monterey. The seas in the fetch were high at the time of computed swell origin and the surface to geostrophic wind ratio was 0.83. The dominant swell emerged from the fetch at a time when its group

velocity equalled the velocity of the fetch toward Monterey. KEYWORDS: Coastal Processes, Oceanography & Meteorology storm waves, wave climate, wave climate, wind California, Subregion IV, S. Monterey Bay Cell Wave Groups in Ocean Swell AUTHOR(S): Thompson, Warren C. SOURCE: U.S. Naval Postgraduate School, Monterey, CA; Proceedings of International Symposium on Wave Measurement and Analysis, Waves '74, ASCE, New Orleans, LA, Vol 1, pages 338-351, ASCE, NY, NY DATE: 09/11/74 ABSTRACT: A study was made of wave groups appearing in 20-minute pressure records of five ocean swell trains recorded on the California Coast. The basic measures obtained from each group identified include the maximum wave height, Hg, and the average period, Tg, of the component waves. The maximum, mean, and minimum values of Hg from each record were found to have a well-defined statistical relationship. They are correlated to the significant height obtained by averaging the highest one-third of the waves in a record, and to representative height parameters derived from the theoretical wave-height distribution of Longuet-Higgins (1952). The average of the Tg values in a record, found in KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Specifications for the Production of Ocean Wave Statistics for the California Coast From FNWC Singular Wave Analyses AUTHOR(S): Thompson, Warren C. SOURCE: California Department of Navigation and Ocean Development, Sacramento, CA, 22 pages, Report No. NPS-68th-76031 DATE: 03/31/76 ABSTRACT: Specifications are presented for the production of ocean wave statistics for the California coast from approximately 28 years of archived synoptic wave analyses computed by the Fleet Numerical Weather Central, Monterey, California. The wave statistics, designed for coastal engineering application, would be prepared for six deep-water stations uniformly spaced along the coast from the Oregon border to the Mexican border, and would be prepared in the form of desk-top copy immediately available for use. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation

California, Subregion I, Subregion II, Subregion IV, Subregion V Ocean Wave Statistics from FNWC Spectral Analyses AUTHOR(S): Thompson, Warren C. SOURCE: U.S. Naval Postgraduate School, Monterey, CA; Proceedings of Fifteenth Coastal Engineering Conference, American Society of Civil Engineers, New York, NY, July 1977 DATE: 07/11/77 ABSTRACT: Climatological wave data can be compiled in two forms from spectral ocean wave analyses produced by the Fleet Numerical Weather Central at Monterey, California: (1) spectral element statistical tables currently in use, and (2)spectral element statistics, which give the frequency of occurence of energy densities contained in a matrix of 15 frequency bands and 12 direction bands. Experimental formats of both types of statis- tical compilations are presented, their properties are examined, and the coastal engineering applications of these statistics are discussed. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate, wave transformation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Coast Erosion And Run-up On The Phillips Petroleum Property, Southern Monterey Bay AUTHOR(S): Thompson, Warren C. Unpublished Consulting Report For Ponderosa Pines, available at SOURCE: the U.S. Naval Postgraduate School, Monterey, CA DATE: 01/01/81 Not Reviewed. ABSTRACT: KEYWORDS: Coastal Processes coastal erosion, dunes, storm surge, storm waves, wave climate, wave transformation California, Subregion IV, S. Monterey Bay Cell Updated Annotated Bibliography and Assessment of Pertinent Data for Monterey Bay-Task I-Addendum AUTHOR(S): Thornton, Edward B.; Boston, Noel E.; Denner, Narren W. SOURCE: Environmental Research Associates, San Francisco, CA DATE: 07/15/72 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics coastal currents, coastal erosion, environmental constraints, wave climate California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell

Examination Of Coast Erosion At The Phillips Petroleum Property, Southern Monterey Bay AUTHOR(S): Thornton, Edward B. SOURCE: Unpublished Consulting Report For The Monterey County Council, 8 Pages, available at US Naval Postgraduate School, Monterey, CA DATE: 02/20/84 ABSTRACT: Not Reviewed. KEYWORDS: Coastal Processes coastal erosion, dunes, longshore transport, shoreline changes, wave climate California, Subregion IV, S. Monterey Bay Cell Sea Cliff Erosion as a Measure of Coastal Degradation, San Mateo County, California AUTHOR(S): Tinsley, John C., III SOURCE: Stanford University, School of Earth Sciences, Geology Department, Stanford, California DATE: 05/30/72 ABSTRACT: Pictures of sea cliff erosion due to wave action and landsliding. The rate of erosion is estimated to be moderate with an average rate south of San Francisco of about 0.3 meters (1 foot) per year. KEYWORDS: Coastal Processes coastal erosion, shoreline changes California, Subregion III, San Francisco Cell, S. San Francisco Reach, Half Moon Bay Cell, S. Half Moon Bay Reach-A Local Storms of the Pacific Coast and Their Effects on Wave and Beach Conditions AUTHOR(S): Todd, D. K.; Wiegel, R. L. SOURCE: University of California, Berkeley, Institute of Engineering Research, 15 leaves, illustrations, (IER series No.3, Issue 324) HE-116-324 DATE: 06/01/51 ABSTRACT: Because of the erosive action on beaches of high, shortperiod waves generated by local storms in near-coastal areas, the meteorological situations causing these storms are investigated. The situations for the Pacific coast of the United States are classified, based on a study of three years of daily weather maps. The monthly and latitudinal distributions of local storms are tabulated. Forecasting problems and limitations of local storm waves are discussed. Data from two local storms at Oceanside, California are presented to illustrate the wind and wave conditions forecasting problems, and beach effect. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal erosion, storm damage, storm waves, wave climate, wave transformation

California, Subregion I, Subregion II, Subregion IV, Subregion V Maps Of Ocean Beach AUTHOR(S): Towill, Inc. SOURCE: Prepared for City of San Francisco by Towill, Inc, San Francisco, CA DATE: 01/01/78 ABSTRACT: Maps illustrate serious beach erosion problem at Ocean Beach, San Francisco, California. KEYWORDS: Coastal Processes, Survey aerial photography, coastal erosion, maps California, Subregion III, San Francisco Cell Geology of Point Sur Quadrangle, California AUTHOR(S): Trask, Parker D. SOURCE: University of California, Berkeley, Bulletin of the Department of Geological Sciences, Volume 16, No. 6, pages 119-186 DATE: 11/10/26 Geological study of the Point Sur area, including: geography ABSTRACT: topography drainage, descriptive geology of the Sur series, Franciscan series, Chico series, Monterey group, San Pablo group, structure, geomorphology and geological history. KEYWORDS: Geomorphology geology, geomorphic processes California, Subregion V, S. Carmel River Reach, Point Sur Cell, S. Point Sur Reach Cut and Fill on Point Reyes Beach, California AUTHOR(S): Trask, Parker D.; Johnson, Charles A.; Scott, Theodore University of California, Berkeley, College of Engineering, 10 SOURCE: pages, illustrations (IER series 14, Issue 19), Wave Research Laboratory Technical Report DATE: 09/01/55 ABSTRACT: In connection with a study on grain size variation on Point Reves Beach, data was obtained which permitted the making of charts and statistical studies of the cut and fill at two stations, 5 miles apart along Point Reyes Beach. These graphs and statistical compilations form the basis of this paper. KEYWORDS: Coastal Processes, Geomorphology beaches, beach profiles, grain size, littoral sediment, offshore/onshore transport California, Subregion II, Point Reyes Cell Sand Variation at Point Reyes Beach, California

AUTHOR(S): Trask, Parker D.; Johnson, Charles A.

USACE Beach Erosion Board, Office of the Chief of Engineers, SOURCE: Technical Memorandum No. 65, 86 pages, illustrations, also UCB, Institute Engineering Research series 14, issue 18 DATE: 10/01/55 ABSTRACT: The objective of this paper was to present data on grain size variation on a highly variable beach, Point Reyes Beach. A sampling program was done to determine variation in grain size distribution both within a short distance and individual parts of the beach and from place to place along the beach over a distance of 5 miles between stations. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment California, Subregion II, Point Reyes Cell Changes in Configuration of Point Reyes Beaches, California, 1955-1956 AUTHOR(S): Trask, Parker D. SOURCE: University of California, Berkeley, Institute of Engineering Research, Wave Research Laboratory, Technical Report Series III, Issue 20, (IER-14-20) DATE: 10/01/56 ABSTRACT: Point Reyes Beach is a highly variable beach, characterized by steep slopes, high berms and prominent cusps. It was surveyed 8 times between August 1955 and June 1956. The sands were coarse, ranging from a mean of 560 microns (0.38 phi units) in February to 770 microns (0.84 phi units) in October. Intervening months have intermediate grain size. The general variation or standard deviation of the samples on the beach ranged from 0.30 to 0.35 phi units, which indicated that the median diameter of two-thirds of the samples on the beach at any one time ranged within 20 to 25 percent on either KEYWORDS: Coastal Processes, Geomorphology, Survey beaches, beach profiles, grain size, littoral sediment California, Subregion II, Point Reyes Cell Changes in Configuration of Point Reyes Beach, California, 1955-1956 AUTHOR(S): Trask, Parker D. SOURCE: USACE San Francisco District, San Francisco, CA, Technical Memorandum Number 91, (University, California at Berkeley, IER series 14, issue 20),49 pages with illustrations DATE: 11/01/56 ABSTRACT: This report presents a summary of sand sample data obtained at one beach over a year's time and statistical analysis of this data. Also, there is certain data on beach cut and fill over this period and also an appendix concerning the previous 18 month period.

KEYWORDS: Coastal Processes, Geomorphology, Survey beaches, beach profiles, grain size, littoral sediment California, Subregion II, Point Reyes Cell Beaches near San Francisco, California, 1956-1957 AUTHOR(S): Trask, Parker D. SOURCE: University of California, Berkeley, Institute of Engineering Research, Wave Research Laboratory, Technical Report Series 14, Issue 21, 76 pages, maps, tables, (IER-14-21) DATE: 11/01/58 ABSTRACT: Eighteen profiles on beaches in the vicinity of San Francisco were performed at intervals of 2 to 6 weeks from July 1956 to June 1957. Seven of these profiles were north of Golden Gate and eleven were south. The seven northern profiles are three on Point Reyes Beach exposed to the full force of waves from North Pacific Ocean; one is at Drakes Cove on the south side of Point Reyes beach in the lee of Point Reyes; and three are on Stinson beach eastward from the mouth of Bolinas Lagoon, midway between Drakes Cove and the Golden Gate. The eleven southern profiles were distributed at intervals over a distance of 11 miles from the north end of Ocean Beach in San Francisco to Rockaway Beach. KEYWORDS: Coastal Processes, Survey beaches, beach profiles, grain size, littoral sediment, longshore transport, shoreline changes California, Subregion II, Subregion III, Point Reyes Cell, Drakes Bay Cell, Mechanical Analysis of Beach Sands Near San Francisco, California AUTHOR(S): Trask, Parker D.; Snider, Sigrid; Klehn, Henry Jr. SOURCE: University of California, Berkeley, Institute of Engineering Research, Water Research Labortory, IER series 14, Issue 22, 73 pages, illustrations DATE: 01/01/59 ABSTRACT: The regimen of eighteen beaches in the vicinity of San Francisco California was investigated from July 1956 to June 1957. At intervals of two to six weeks, beach samples and profiles were taken at each of the beaches. The 18 beaches include: Drakes Cove on the south side of Point Reyes Peninsula; Stinson Beach, a long narrow spit which almost closes Bolinas Bay, midway between Drakes Cove and the Golden Gate; and an interval of one-half mile at the north end of Ocean Beach near the Cliff House in San Francisco.

KEYWORDS: Coastal Processes, Survey beaches, beach profiles, grain size, littoral sediment, shoreline changes California, Subregion III, Drakes Bay Cell, Bolinas Bay Cell, San Francisco Cell Beaches near San Francisco, California 1956-1957 AUTHOR(S): Trask, Parker D. SOURCE: USACE Beach Erosion Board (Now USACE Coastal Engineering Research Center, Vicksburg, MS), Technical Memorandum No. 110, 89 pages, illustrations, IER Series 14, No. 21 DATE: 04/01/59 ABSTRACT: This report presents a summary of sand sample and foreshore profiles at 2 to 6 week intervals over a 1-year period on ocean beaches in the vicinity of San Francisco. The purpose is for effective control of beaches which required a knowledge of the source and transport of sand on beaches. KEYWORDS: Coastal Processes, Survey beaches, beach profiles, grain size, littoral sediment, longshore transport, shoreline changes California, Subregion II, Subregion III, Point Reyes Cell, Drakes Bay Cell. Bolinas Bay Cell, San Francisco Cell Beaches Near San Francisco, California, 1957-1958 AUTHOR(S): Trask, Parker D.; Snow, David T. SOURCE: University of California, Berkeley, Institute of Engineering Research Laboratory, Technical Report, 14-23, 70 pages, maps, tables, diagrams DATE: 10/01/61 ABSTRACT: This report presents a summary of sand sample and foreshore profiles at 2 to 6 week intervals over a 1-year period on ocean beaches in the vicinity of San Francisco. The purpose is for effective control of beaches which required a knowledge of the source and transport of sand on beaches. KEYWORDS: Coastal Processes, Survey beaches, beach profiles, grain size, littoral sediment, longshore transport, shoreline changes California, Subregion II, Subregion III, Point Reyes Cell, Drakes Bay Cell, Bolinas Bay Cell, San Francisco Cell Southwest Ocean Outfall, Geotechnical and Oceanographic Predesign Studies AUTHOR(S): Treadwell, Donald D.; Hervert, George E.; Otus, Mahut; Gilbert, Oliver II Jr.

SOURCE: Coastal Zone '78, the Proceedings of the Symposium of Technical, Enviromental, Socioeconomic, and Regulatory Aspects of Coastal Zone Management, pp 1862-1877, ASCE, New York, NY DATE: 03/16/78 ABSTRACT: The field data acquisition tasks for the predesign phase of the Southwest Ocean Outfall Project for the City and County of San Francisco involved the use of a wide variety of equipment and techniques. Although the onshore exploration program was exten- sive, work in the surf zone and offshore presented a particular challenge. A shallow-water work platform, a drill ship, and an ocean survey vessel were used to gather information on soil conditions, fault locations, currents, density profiles, and water quality. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey coastal currents, environmental constraints, geology, hydrographic surveys, nearshore currents, neotectonics California, Subregion III, San Francisco Cell Design of Point Ano Nuevo Small Craft Harbor AUTHOR(S): Tuttle, Donald C. SOURCE: University of California, Berkeley, unpublished student paper, 60 pages, available from University of California at Berkeley, Water Resources Archives DATE: 05/01/65 ABSTRACT: Design considerations for a small craft harbor at Point Ano Nuevo. including: details for constructions of structures, wave climate, wind load. currents, storm wave characteristics, and defraction diagrams. KEYWORDS: Coastal Processes coastal structures, nearshore currents, storm waves, wave climate, wave transformation, wind California, Subregion IV, S. Half Moon Bay Reach-B Investigation of Methods for Determining Coastal Bluff Erosion: Historic Section, Gold Bluffs to the Little River, Humboldt Co. AUTHOR(S): Tuttle, Donald C. SOURCE: Humboldt County Public Works, Eureka, CA; Sea Grant Report DATE: 03/01/81 ABSTRACT: A report reviewing existing historical literature, maps and photographs on bluff erosion and stability along the shoreline between Gold Bluffs and Little River in Humboldt County. This information was prepared to assist decision making bodies. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics aerial photography, coastal erosion, institutions/planning/mgmt., maps, shoreline changes

California, Subregion I, Klamath River Cell, S. Klamath River Reach, Eureka Cell Investigation of Coastline Retreat at Shelter Cove, California AUTHOR(S): Tuttle, Donald C. SOURCE: National Sea Grant College Program, Rockville, Maryland, Sea Grant Project Number R/NP-1-10-F, 53 pages DATE: 03/01/82 ABSTRACT: A report reviewing the existing historical literature, maps and photographs on bluff erosion and stability along the shoreline at Shelter Cove. This information was prepared to assist decision making bodies. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics aerial photography, coastal erosion, institutions/planning/mgmt., maps, shoreline changes California, Subregion I, Subregion II, Spanish Flat Cell, S. Spanish Flat Reach Pigeon Point Formation: An Upper Cretaceous Shoreline Succession Central California AUTHOR(S): Tyler, John H. SOURCE: San Francisco State University, Department of Geology, Journal of Sedimentary Petrology, Tulsa, Oklalahoma, Sept 1972, Oceanic Abstracts (73 - 02811)73-4B-00581), Bethesda, MD DATE: 09/01/72 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, petrology, shoreline changes California, Subregion III, S. Half Moon Bay Reach-A Tidal Bench Marks, State of California AUTHOR(S): U.S. Coast and Geodetic Survey SOURCE: U.S. Coast and Geodetic Survey (now National Ocean Service, Rockville, MD), Department of Commerce Engineer Investigations, 149 pages DATE: 09/01/35 ABSTRACT: A survey of tidal bench marks, of which descriptions and elevations are given. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey bench marks, tides California, Subregion I, Subregion II, Subregion IV, Subregion V Tidal Bench Marks, State of California AUTHOR(S): U.S. Coast and Geodetic Survey SOURCE: U.S. Coast and Geodetic Survey (now National Ocean Service, Rockville, MD), 148 pages DATE: 10/01/35 ABSTRACT: The tidal bench marks have been established at different times by

the U.S. Coast and Geodetic Survey and other federal organi- zations and have been used in connection with hydrographic work along the coast. The elevations are given above mean lower low water and half tide level. The year of establishment, when known, is given in parentheses following the number of the bench mark. The elevations of tide planes, referred to mean lower low water, are given in a table following the descriptions of the bench marks at each station. The highest and lowest tides represent the probable extreme heights for each locality and in places where only short series of observations are available have been KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey bench marks, tides California, Subregion I, Subregion II, Subregion IV, Subregion V Tidal Bench Marks AUTHOR(S): U.S. Coast and Geodetic Survey U.S. Coast and Geodetic Survey (now National Ocean Service, SOURCE: Rockville, MD), 75 pages DATE: 03/01/42 ABSTRACT: The descriptions and elevations of tidal bench marks in this publication are based on "Tidal Bench Mark, State of California", September 1935. This includes only bench marks in the vicinity of tide stations along the coast. For each place, highest tide, higher high water, mean high water, halftide level, Sea Level Datum of 1929, mean low water, lower low water datum, and lowest tide. KEYWORDS: Coastal Processes, Oceanography & Meteorology bench marks, tides California, Subregion I, Subregion II, Subregion IV, Subregion V Hydrographic Index: California AUTHOR(S): U.S. Coast and Geodetic Survey SOURCE: U.S. Coast and Geodetic Survey (now National Ocean Service, Rockville, MD), 1 volume, unpaged, maps DATE: 01/04/65 ABSTRACT: Index of hydrographic charts for California. KEYWORDS: Survey hydrographic surveys, maps California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Tide Data 1963-1967 for San Francisco and Monterey, California AUTHOR(S): U.S. Coast and Geodetic Survey

SOURCE: U.S. Coast and Geodetic Survey (now National Ocean Service, Rockville, MD), 4 sections (in 4 unpaged, unbound volumes), map, tables DATE: 01/01/67 ABSTRACT: Contains data on tidal benchmarks and tidal datum planes at Monterev and San Francisco, Ca. KEYWORDS: Coastal Processes, Oceanography & Meteorology bench marks, tides California, Subregion III, Subregion IV, San Francisco Cell, S. Monterey Bay Cell Drakes Bay, Limatour Spit, Maps AUTHOR(S): U.S. Coast and Geodetic Survey SOURCE: U.S. Coast and Geodetic Survey, (now National Ocean Survice, Rockville, MD), University of California, Berkeley (library map room, Water Resources Archives) DATE: 03/01/74 ABSTRACT: A set of xeroxed maps of Drakes Bay for various years, ranging from 1855–1973. Hydrography and topography. KEYWORDS: Survey beaches, hydrographic surveys, maps, tidal inlets California, Subregion III, Point Reyes Cell, S. Point Reyes Reach, Drakes Bav Cell Wind Speed Data Analysis, Monthly Summary of Wind Speed Statis- tics, Bodeqa Coast Guard Station. AUTHOR(S): U.S. Coast Guard U.S. Coast Guard, Bodega Bay Unit, Bodega Bay, California, Wind SOURCE: Data, 1979 DATE: 06/01/79 Wind Data for January thru June 1979, including mean wind ABSTRACT: speed, standard deviation of speeds, mean energy speed, mean of cube of wind speeds, power equivalant wind speeds, standard deviation of energy density, mean power density, list of density functions, etc. KEYWORDS: Coastal Processes, Oceanography & Meteorology wind California, Subregion II, Russian River Cell, S. Russian River Reach, Bodega Bay Cell Rivers in California AUTHOR(S): U.S. Congress SOURCE: U.S. Government Printing Office, Washington, D.C. DATE: 01/01/44 ABSTRACT: A reference quide to the major California rivers including data on

population, agriculture, vegetation cover, tributary streams, scope of survey, and aerial photography. Also included is information on income activity, damages due to flooding, rain- fall (hydrology), and climate. KEYWORDS: Hydrology & Hydraulics, Socioeconomics, Survey aerial photography, population, precipitation, property value/land use, river discharge, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V Public Law 89-298 AUTHOR(S): U.S. Congress SOURCE: U.S. Congress, 89th Congress, S.2300, Washington, D.C. DATE: 10/26/65 Authorizing the construction, repair and preservation of ABSTRACT: certain public works on rivers and harbors for navigation, flood control and other purposes. KEYWORDS: Socioeconomics coastal erosion, coastal structures, institutions/planning/mgmt., reservoirs, shoreline use, storms/floods California, Subregion I, Subregion II, Subregion IV, Subregion V A Bill to Amend the Coastal Zone Management Act of 1972 AUTHOR(S): U.S. Congress SOURCE: U.S. Government Printing Office, Washington, D.C., 51 pages, (H.R. 3981, House Report No. 94-878) by Mr. Murphy of New York, 94th Congress, 20th Session DATE: 03/04/76 A bill to amend the Coastal Zone Management Act of 1972. ABSTRACT: Amendment was to authorize and assist the coastal states to study, plan for, manage, and control the impact of energy resource development and production which affects the coastal zone. KEYWORDS: Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V Coastal Zone Management Act Amendments of 1976 AUTHOR(S): U.S. Congress SOURCE: U.S. Laws, Public Law 94-370, 94th Congress, S.586, Washington, D.C., July 26, 1976 DATE: 07/26/76 ABSTRACT: An act of Congress to improve coastal zone management in the United States.

KEYWORDS: Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Eel River, California AUTHOR(S): U.S. Congress, House of Representatives SOURCE: 73rd Congress, Washington, D.C., 2nd Session, Document No. 194, 50 pages DATE: 09/01/33 ABSTRACT: A recommendation was made that further development of water resources in the Eel River Basin should be left to the initiative of local interests under the provisions of the Federal Water Power Act. In the formulation of plans for the conservation of the water resources of the Eel River Basin, power development has been a primary consideration. Regulation of stream flow for power was seen to have only an incidental effect on navigation, flood control, and irrigation. Navigation, formerly of local importance on the lower river, has dwindled with the improvement of roads and rail connections. Flood control was seem as a minor local problem to be solved by levee construction and channel stabilization. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., river discharge, stream gaging, watersheds California, Subregion I, Subregion II The Nation's Estuaries: San Francisco Bay and Delta, California (part 2) AUTHOR(S): U.S. Congress, House of Representatives U.S. House of Representatives, Washington, D.C., Hearings SOURCE: before a subcommittee of the committee on government operations, ninty-first congress (First Session), 564 pages, with maps and graphs DATE: 08/21/69 ABSTRACT: Examination by the subcommittee of the economy and efficiency of the Federal Government's policies and practices as they affect the environment of the San Francisco Bay and Delta. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal currents, deltas, environmental constraints, estuarine sediment storage, growth potential/recreation, institutions/planning/mgmt. California, Subregion III, Bodega Bay Cell, San Francisco Cell Pilot Charts of the North Pacific Ocean AUTHOR(S): U.S. Defense Mapping Agency SOURCE: U.S. Defense Mapping Agency, Hydrographic Center, Washington, D.C., 9 maps

DATE: 01/01/74 ABSTRACT: Maps showing air temperature, visibility, sea surface tempera- tures of the North Pacific Ocean for monthly time periods from September 1974 to Mav 1975 (only 9 out of 12 were available). KEYWORDS: Oceanography & Meteorology climatology, maps, wind California Russian River Watershed, California - Preliminary Examination for Flood control AUTHOR(S): U.S. Department of Agriculture SOURCE: U.S. Department of Agriculture, Bureau of Agriculture Economics, Preliminary Examination Report DATE: 03/01/42 ABSTRACT: Detailed survey of the watershed of the Russian River to determine the type of flood control measures best suited to the watershed needs. Tables, photographs, and maps are included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., maps, precipitation, property value/land use, storms/floods, watersheds California, Subregion II, S. Navarro River Reach-B, Russian River Cell, S. Russian River Reach, Bodega Bay Cell, S. Bodega Bay Reach Report of Survey - The Russian River Watershed, California AUTHOR(S): U.S. Department of Agriculture U.S. Department of Agriculture, Soil Conservation Service, SOURCE: Pacific Region, various pagings DATE: 02/01/50 This report outlines a program for reduction of soil erosion ABSTRACT: on the Russian River Watershed in California. An analysis of the costs and benefits is included. The watershed is located in the northwestern part of California, and covers an area of approximately 1508 square miles. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, river sediment discharge, stream gaging, storms/floods, watersheds California, Subregion II, S. Navarro River Reach-B, Russian River Cell, s. Russian River Reach, Bodega Bay Cell, S. Bodega Bay Reach Report of Survey Russian River Watershed, California: For Runoff and Waterflow Retardation and Soil Erosion Prevention, for Flood Control Purposes AUTHOR(S): U.S. Department of Agriculture; California Forest and Range Experiment station SOURCE: U.S. Department of Agriculture, Washington, D.C., 1 Volume, 2

editions, illustration, various pagings DATE: 11/03/50 ABSTRACT: Purpose and Scope of Report - This report outlines a program for runoff and waterflow retardation and reduction of soil erosion on the Russian River watershed in California. The watershed is located in the northwestern part of California, and covers an area of approximately 1508 square miles. KEYWORDS: Hydrology & Hydraulics, Socioeconomics geology, property value/land use, river sediment discharge, stream gaging, storms/floods, watersheds California, Subregion II, S. Navarro River Reach-B, Russian River Cell, s. Russian River Reach, Bodega Bay Cell, S. Bodega Bay Reach Review Report, Pajaro River Watershed, California AUTHOR(S): U.S. Department of Agriculture SOURCE: U.S. Department of Argiculture, Washington, D.C., Appendix I included DATE: 04/01/52 This report outlines a program of runoff and waterflow ABSTRACT: retardat- ion and reduction of soil erosion on the Pajaro River watershed in California and presents recommendations. An analysis of cost and benefits is included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics geology, institutions/planning/mgmt., property value/land use, river sediment discharge, storms/floods, watersheds California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Review Report, Pajaro River Watershed, California AUTHOR(S): U.S. Department of Agriculture SOURCE: U.S. Department of Agriculture, Soil Conservation Service, Pacific Region, 20 pages DATE: 06/01/53 ABSTRACT: Report outlining a program of watershed treatment for runoff and waterflow retardation and soil erosion prevention needed in the Pajaro River watershed. Report presents recommendations for authorization of flood prevention measures. KEYWORDS: Hydrology & Hydraulics, Socioeconomics geology, institutions/planning/mgmt., river sediment discharge, storms/floods, watersheds California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Stabilizing Sand Dunes on the Pacific Coast with Woody Plants AUTHOR(S): U.S. Department of Agriculture SOURCE: U.S. Department of Agriculture, Soil Conservation Service, Miscellaneous Publication No. 892-6-PO, 18 pages, illustrations DATE: 02/01/62

ABSTRACT: Establishing and maintaining permanent vegetaion has proved to be a very effective and efficient means of stabilizing coast sands dunes. The damaged dune areas on the Pacific coast of North America are the result of accelerated erosion caused primarily by the destruction of a cover of native vegetation. In some areas the climax cover was herbaceous, in others it was woody, and still others it was a combination of herbaceous and woody plants. The choice of plants for the reconstruction of a permanent cover depends on the inherent limitations of the site and the intended land use for the area. KEYWORDS: Coastal Processes, Geomorphology coastal erosion problems, dunes, shore protection California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Sediment Yield and Land Treatment, Eel and Mad River Basins AUTHOR(S): U.S. Department of Agriculture U.S. Department of Agriculture - Soil Conservation Service SOURCE: DATE: 06/01/70 The California Department of Water Resources requested a ABSTRACT: reconnaissance level study of sources and causes of high sediment yields in the North Coastal area and an assessment of the abil- ity of existing USDA programs to solve the problems identified. This appendix involves the Eel and Mad River Basins; presenting general physical characteristics and resources of the area. The Soil Conservation Service, and Forest Service also cooperated in the effort. KEYWORDS: Hydrology & Hydraulics, Socioeconomics geology, property value/land use, reservoirs, river sediment discharge, urbanization, watersheds California, Subregion I, Eureka Cell Atlas of Rivers Basins of the United States AUTHOR(S): U.S. Department of Agriculture SOURCE: U.S. Department of Agriculture, Soil Conservation Service, second edition, 82 maps DATE: 06/01/70 An atlas of the river basins of the United States. Data ABSTRACT: includes drainage, boundaries of water resources regions, etc., KEYWORDS: Hydrology & Hydraulics, Survey maps, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V

Sediment Yield and Land Transport, The Klamath, Trinity, and Smith River Basins; Russian River, Mendocino Coastal and Clear Lake Basins AUTHOR(S): U.S. Department of Agriculture

SOURCE: U.S. Department of Agriculture, Soil Conservation Service, Portland, Oregon, Appendix number 2 of 3, 152 pages DATE: 06/01/72 ABSTRACT: This study presents the general physical characteristics and resources of the basins. Sediment rates are given and possibilities for the implementation of land treatment programs are discussed. Maps included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, institutions/planning/mgmt., maps, property value/land use, river sediment discharge, watersheds California, Subregion I, Subregion II, Smith River Cell, Klamath River Cell, Ten Mile River Cell, Main Report, Sediment Yield and Land Treatment, North Coastal Area of California and Portions of Southern Oregon AUTHOR(S): U.S. Department of Agriculture SOURCE: U.S. Department of Agriculture, Soil Conservation Service, Portland. Oregon, Main report following 2 other appendixes, 135 pages DATE: 09/01/72 Objective of the study was to evaluate sediment yields, ABSTRACT: analyze land, water and management problems and to formulate methods of alleviating problems utilizing U.S. Department of Agriculture programs. Maps, tables, and photos included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, institutions/planning/mgmt., maps, river sediment discharge, watersheds California, Subregion I, Subregion II Weather Records for the Region Offshore Humboldt Bay AUTHOR(S): U.S. Department of Commerce; Environmental Science Service Administration SOURCE: U.S. Department of Commerce, Environmental Science Service Administration, Environmental Data Service, National Weather Records Center, unpaged, tables DATE: 01/01/67 ABSTRACT: Meteorological data for Humboldt Bay area. Includes Marsden Square map of the world. KEYWORDS: Oceanography & Meteorology, Survey climatology, precipitation, storms/floods, wind California, Subregion I, Eureka Cell Record of Survey Catalog-Control, Surveys and Topography AUTHOR(S): U.S. Department of the Interior SOURCE: U.S. Department of the Interior, Bureau of Reclamation, Sacramento, CA, Third Edition DATE: 03/01/69

ABSTRACT: Report summarizing information on past surveys within boundary of Region 2, (from the Smith River in Oregon to Santa Clara River in Southern California, and areas in California and Nevada east of the Sierra Nevada Mountains, the Lahontan Basin). KEYWORDS: Survey maps California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Ocean Outfall Extension Project (WPC-CAL-468), Carmel Sanitary District, Carmel, California (Final Environmental Impact Statement) AUTHOR(S): U.S. Environmental Protection Agency SOURCE: U.S. Environmental Protection Agency, San Franciso, California, 69 pages, Water Resources Abstracts (050224 W73-00497), Minneapolis, MN: Environmental Hydrology Corporation DATE: 03/08/72 ABSTRACT: Study involved work related to the Carmel Sanitary District's construction of an ocean outfall sewer extension in Carmel Bay off the central coast of California. Biological damage, health hazards, and unesthetic conditions were to be eliminated. Abnormal bay water salinity and temperature conditions created by the old discharge were to be eliminated. Predicted impacts of the outfall construction included the temporary removal of plant and animal life in the path of the trench excavation and possible damage to portions of the Carmel Canyon wall as the KEYWORDS: Coastal Processes, Socioeconomics beaches, environmental constraints, institutions/planning/mgmt., submarine canyons, urbanization California, Subregion IV, Subregion V, Carmel River Cell Environmental Impact Statement for the San Francisco Channel, Bay Dredged Material Disposal Site Designation AUTHOR(S): U.S. Environmental Protection Agency SOURCE: U.S. Environmental Protection Agency, Office of Water Criteria and Standards Division, Washington, D.C., (Final) Various pagings DATE: 08/01/82 ABSTRACT: Evaluation of site for disposal of dredged material. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology, Socioeconomics environmental constraints, littoral sediment, tidal inlets, wave climate California, Subregion III, Bolinas Bay Cell, San Francisco Cell Draft EIS for the Designation of a Dredged Material Disposal Site off Humboldt Bay, Humboldt County, CA AUTHOR(S): U.S. Environmental Protection Agency SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 12/01/84

ABSTRACT: This EIS considered the designation of an interim ocean disposal site off Humboldt Bay, Calif, for the continued disposal of dredged material. After a thorough evaluation of the proposed action, the alternatives, and environmental consequences of the proposed action, the EIS tentatively concludes that there are few significant unavoidable adverse environmental effects which are irreversible or require an irretrievable commitment of resources. The EIS documents the decision making process and supports the tentative decision to designate the proposed (interim) site. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics coastal currents, environmental constraints, grain size, sedimentation, wave climate California, Subregion I, Eureka Cell Flood of 1950 in Southwestern Oregon and Northwestern California AUTHOR(S): U.S. Geological Survey SOURCE: U. S. Geological Survey, Water-Supply Paper 1137-E, pages 413-503, U.S. Government Printing Office, Washington, D.C. DATE: 01/01/53 ABSTRACT: Continuous rains through most of October 1950, culminating in heavy rains 27-30 October, caused the streams of southwestern Oregon and northwestern California to rise rapidly to high peaks. Flood-affected coastal areas in California included the Smith, Klamath, Mad, and Eel River basins. This report includes stream gaging data for the Smith and Trinity Rivers, historical data for the Smith and Klamath rivers, and precipitation data for Crescent City. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging, storms/floods, watersheds California, Subregion I, Smith River Cell, Compilation of Records of Surface Waters of the U.S. through Sep. 1950, Part 11-A, Pacific Slope Basins in California, except Central Valley AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey, Water-Supply Paper 1315-B, U.S. Government Printing Office, Washington, D.C. DATE: 01/01/60 ABSTRACT: This volume presents monthly and yearly summaries of streamflow and reservoir data collected before Sept. 1950, by the U.S. Geo-logical Survey. Included with these data are records furnished by other Federal, State, and

private agencies. The data presented for most of the gaging stations comprise a description of the station, tables of monthly discharge and runoff, and a yearly summary table. The station description gives the location of the gaging station, drainage area, supplemental records available (for some stations), types and datums of gages average discharge, extremes of discharge, gneeral remarks con-KEYWORDS: Hydrology & Hydraulics reservoirs, river discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Summary of Floods in the United States During 1955 AUTHOR(S): U.S. Geological Survey U.S. Geological Survey, Water-supply Paper 1455-B, pages 69-SOURCE: 143, U.S. Government Printing Office, Washington, D.C. DATE: 01/01/62 A destructive series of floods occurred in California in ABSTRACT: December 1955 and continued on into January 1956. The floods described in this report are given in chronological order. The data presented include: (1) a description of the storm, the flood, and flood damage; (2) a map of the flood area showing the location of flood-determination points and for some floods the location of precipitation stations or isohyets; and (3) rainfall data and flood-peak stages and discharges of the affected streams. KEYWORDS: Hydrology & Hydraulics precipitation, river discharge, stream gaging, storms/floods, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Eureka Cell, Russian River Cell, Santa Cruz Cell Summary of Floods in the United States During 1958 AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey, Water-Supply Paper-B, 97 pages, U.S. Government Printing Office, Washington, D.C. DATE: 01/01/63 This report covers 1958 flooding in California. A series of ABSTRACT: storms from 23 January 1958 to February 16 brought large amounts of precipitation to northern California and produced damaging floods, particularly in the Lower Sacramento Valley. The most intense rainfalls were associated with frontal passage of April 2-3. In San Francisco, 0.96 inches of rain fell in an hour, the greatest hourly intensity recorded there since the maximum of 1.07 inches in

1912 KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging, storms/floods, watersheds California, Subregion III, Subregion IV, Compilation of Records of Surface Waters of the United States, October 1950 to September 1960, Part 11, Pacific Slope Basins in California AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey, Water-Supply Paper 1735, U.S. Government Printing Office, Washington, D.C. DATE: 01/01/64 ABSTRACT: This report presents a summary of records of stream discharge and reservoir contents collected from October 1950 to Sep. 1960 by the Geological Survey. These records are supplemented by data from other agencies. Results of miscellaneous discharge measurements and, in general, stage records have been excluded. The data presented for most of the gaging stations comprise a description of the station, a table of monthly discharge in cubic feet per second, a table of monthly discharge in acre-feet and a yearly summary table. The station description gives the name of the river basin, the station number and name, the KEYWORDS: Hydrology & Hydraulics reservoirs, river discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion III Summary of Floods in the United States During 1956 AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey, Water-Supply Paper 1530, 85 pages, U.S. Government Printing Office, Washington, D.C. DATE: 01/01/64 This report covers 1956 flooding in California. ABSTRACT: KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging, storms/floods California, Subregion I, Smith River Cell, Klamath River Cell, Eureka Cell, Mattole River Cell Study of the Littoral Movement of Beach Sand by Fluorescent Tracers, Bolinas and Stinson Beach, Ca. July-Dec. 1968. AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey, 34 leaves, copy of handwritten manuscript, 2 Maps DATE: 01/01/68 ABSTRACT: Copy of field notes made during the survey describing procedures and results. KEYWORDS: Coastal Processes, Survey

beaches, littoral sediment, longshore transport, shoreline changes California, Subregion III, Bolinas Bay Cell Study of the Littoral Movement of Beach Sand by Fluorescent Tracers, Bolinas and Stinson Beaches, California, July - October 1968 AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey, field notes, 34 pages DATE: 10/01/68 ABSTRACT: Contracted field notes and diagrams of a fluorescent tracer study of the littoral movement of beach sand at Stinson and Bolinas Beaches. Details of procedure for spreading, movement observations, maps, charts, and tide observation and notes. KEYWORDS: Coastal Processes, Survey beaches, littoral sediment, longshore transport, shoreline changes, tides California, Subregion III, Bolinas Bay Cell Quality of Surface Waters of the United States, Published Yearly 1941 to 1970, Part 11, Pacific Slope Basins in California AUTHOR(S): U.S. Geological Survey U.S. Geological Survey Water-Supply Papers, pages 300-700, U.S. SOURCE: Government Printing Office, Washington, D.C. DATE: 01/01/70 ABSTRACT: The U.S. Geological Survey published annual records of chemical quality, water temperature, and suspended sediment from 1941- 1970. These records are published annually in U.S. Geological Survey Water-Supply Papers. These papers describe the location of sampling stations and the station's drainage area, period of record, extremes of dissolved solids, hardness, temperature, sediment discharge, and other pertinent data. Records of discharge of the streams at or near the sampling station are included in most tables. Sediment grain-size data was collected on selected streams. KEYWORDS: Hydrology & Hydraulics grain size, river discharge, river sediment discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Surface Water Supply of the United States 1961-65, Part 11, Pacific Slope Basins in California, volume 2 AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey Water-Supply Paper 1929, U.S. Government Printing Office, Washington, D.C. DATE: 01/01/70 ABSTRACT: The data in this report is a description of the gaging station tabulations of daily and monthly figures from October 1961 to September 1965. The description of the station gives the location, drainage area, records

available, type and history of gages, average discharge, extremes of discharge, general remarks, and notations on revisions of the previously published record. For gaging stations on streams or canals, a table showing the daily discharge and monthly yearly discharge is given. For gaging stations on lakes and reservoirs, a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gaging heights are KEYWORDS: Hydrology & Hydraulics reservoirs, river discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Index of Surface-Water Records to September 30, 1970- Part 11, Pacific Slope Basins in California AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey Circular 661, 53 pages DATE: 01/01/71 ABSTRACT: This report lists, by basin, streamflow, and reservoir stations in the Pacific slope, basins in California that have data published in reports of the Geological Survey for periods through September 30, 1970. Drainage area. station number, and period of record are given for each station. An alphabetical list of streams, lakes, and reservoirs in California is given at the end of this circular. KEYWORDS: Hydrology & Hydraulics reservoirs, river discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V Water Resources Data for California-Published Yearly 1971 to 1974, Part 2, Water-Quality Records AUTHOR(S): U.S. Geological Survey SOURCE: US. Geological Survey, Water Resources Divsion, Sacramento, CA DATE: 01/01/74 Part 2 of water-resources data for California includes ABSTRACT: records of data for the chemical, physical, and biological charac- teristics of surface and ground water. Sediment discharge data are also included in this report. This is one of a two-part data report the U.S. Geological Survey published yearly between 1971 and 1974 on the hydrology of California. The companion report is water-resources data for California, part 1, surface- water records. KEYWORDS: Hydrology & Hydraulics grain size, river discharge, river sediment discharge, stream gaging California, Subregion I, Subregion II,

Water Resources Data for CA Published Yearly 1971 to 1974 Part 1 Surface Water Records, Colorado R. Basin, S. Great Basin, and Pacific Slope Basins AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey, Water Resources Division, Sacramento, CA DATE: 01/01/74 ABSTRACT: Part 1 of water-resources data for California presents surfacewater records of stream flow or reservoir storage at gaging stations, partial-record stations, and miscellaneous sites. Daily and monthly mean discharge are given in this report. This is part one of a two-part data report the U.S. Geological Survey published yearly between 1971 and 1974 on the hydrology of California. KEYWORDS: Hydrology & Hydraulics reservoirs, river discharge, stream gaging California, Subregion I, Subregion II, Subregion IV, Subregion V Land Use Maps of Monterey, California AUTHOR(S): U.S. Geological Survey SOURCE: U. S. Geological Survey, Department of the Interior, Geological Survey, (land use series) (open file 76-04-2) 5 maps, 77 x 188 cm. scale 1:100,000 DATE: 01/01/76 ABSTRACT: These are 5 maps: No. 1 is Land Use and Land Cover, 1974-1975 Monterey, California; No. 2 is Political Units, 1970, Monterey, California; No. 3 is Hydrologic Units, 1974, Monterey, Calif.; No. 4 is Census County, subdivision, 1970, Monterey, California; No. 5 is U. S. Geological Survey Preliminary Base Map. KEYWORDS: Hydrology & Hydraulics, Socioeconomics maps, property value/land use, watersheds California, Subregion IV, S. Monterey Bay Cell, Carmel River Cell Surface Water Supply of the US. 1966-70, Part 11, Pacific Slope Basins in CA. Volume 2, Basins from the Arroyo Grande to Oregon State Line AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey, Water-Supply Paper 2129, U.S. Government Printing Office, Washington, D.C. DATE: 01/01/76 The data in this report generally comprise a description of ABSTRACT: the gaging station tabulations of daily and monthly figures from October 1966 to September 1970. The description of the stations gives the location, drainage area, records available, type and history of gages, and notations on revisions of the previously published record. For gaging stations on streams or canals a

table showing the daily discharge and monthly and yearly dis- charge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights KEYWORDS: Hydrology & Hydraulics reservoirs, river discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Reports for California by the Geological Survey, Water-Resources Division AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey, Water Resources Division, Sacramento, CA, Water-Resoureces Report, 145 pages DATE: 01/01/78 ABSTRACT: This bibliography presents a listing, by author, of about 1500 reports on the water resources of California perpared and released by the Water-Resources Division from 1898 to Dec. 1977. Reports are indexed by hydrologic area, county, and subject. The subject index is divided into three general categories -- ground water, surface water, and water resources. These general subjects are subdivided into 30 to 60 more specific categories. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology precipitation, reservoirs, river discharge, river sediment discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V Water Resources Data for CA. Published Yearly 1975-1982, Volume 2 Pacific Slope Basins from Arroyo Grande to Oregon State Line Except Central Valley AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey, Water Resources Division, Sacramento, CA, Water-Data Reports CA-75-2 to CA-82-2, 500 pages DATE: 01/01/82 ABSTRACT: Volume 2 of water-resources data for California consists of records of stage, discharge, and water quality of streams and well; stage, contents, and water quality in lakes, reservoirs; and water levels in wells. this volume, published yearly since 1975, presents data for Pacific slope basins in California except the Central Valley. Sediment-discharge data is included in this volume. KEYWORDS: Hydrology & Hydraulics grain size, reservoirs, river discharge, river sediment discharge, stream gaging

California, Subregion I, Subregion II, Subregion IV, Subregion V A Preliminary Investigation of Suspended-Sand Discharge of the Russian River, Sonoma County, California AUTHOR(S): U.S. Geological Survey SOURCE: U.S. Geological Survey, No. 2009-05, March 1971 DATE: 03/01/71 ABSTRACT: Not reviewed. KEYWORDS: Hydrology & Hydraulics grain size, river discharge, river sediment discharge, stream gaging California, Subregion II, Russian River Cell Surface Water Temperature and Density AUTHOR(S): U.S. National Oceanic and Atmospheric Admin. U.S. National Oceanic and Atmospheric Administration, Depart-SOURCE: ment of Commerce, NOS Publication 31-3, U.S. Government Print- ing Office, Washington, D.C., 20402, 89 pages DATE: 01/01/67 ABSTRACT: Includes: List of stations, means and extremes of surface water temperatures and density. KEYWORDS: Coastal Processes, Oceanography & Meteorology climatology California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Key to Index Maps, West Coast, California AUTHOR(S): U.S. National Oceanic and Atmospheric Admin. SOURCE: U.S National Oceanic and Atmospheric Administration, National Ocean Survey, Rockville, MD, 17 leaves DATE: 01/01/81 ABSTRACT: Key to index maps showing locations of published tidal bench marks. KEYWORDS: Geomorphology, Oceanography & Meteorology, Survey bench marks, maps, tides California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V California Marine Boundary Program Final Report 1974-81 AUTHOR(S): U.S. National Oceanic and Atmospheric Admin. SOURCE: U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, National Ocean Survey, Tides and Water Levels Division, Office of Oceanography, 39 leaves DATE: 01/01/82 ABSTRACT: Tidal data obtained from established tide stations is used to determine tidal datums of sufficient accuracy to delineate marine boundaries. KEYWORDS: Oceanography & Meteorology, Survey bench marks, maps, tides California, Subregion I, Subregion II, Subregion IV, Subregion V

Project Instructions, Circulation Survey, Humboldt Bay, Calif AUTHOR(S): U.S. National Oceanic and Atmospheric Admin. SOURCE: Letter to Commanding Officer, N.O.A.A., Vessell McArthur, March 15, 1983, National Ocean Survey, Rockville, MD DATE: 03/15/83 ABSTRACT: This survey was the third of a three-phase field program in California estuaries. This phase of the program began in early October 1983 and continued through the middle of December 1983. The survey area was from the entrance to Hookton Channel in South Bay to Bird Island in Arcata Bay. KEYWORDS: Coastal Processes, Oceanography & Meteorology nearshore currents, tidal inlets, tides California, Subregion I, Eureka Cell Bathymetric Maps and Special Purpose Charts AUTHOR(S): U.S. National Oceanic and Atmospheric Admin. U.S. Dept of Commerce, National Oceanic and Atmospheric SOURCE: Administration, National Ocean Service, Rockville, MD, Map and Chart Catalog 5 DATE: 01/01/84 ABSTRACT: A catalog of bathymetric maps, Florida coastal zone maps, qeophysical maps and data for Alaska, Pacific Ocean, and West- Coast, IHR-GEBCO (plotting sheets), map and chart definitions, marine boundary maps and charts, marine weather service charts, miscellaneous maps and publications, offshore mineral leasing area maps, storm evacuation maps, tidal current charts, and purchasing instructions and prices. KEYWORDS: Oceanography & Meteorology, Survey climatology, hydrographic surveys, maps, nearshore currents, tides California, Subregion I, Subregion II, Tidal Current Tables, Pacific Coast of North America and Asia AUTHOR(S): U.S. National Oceanic and Atmospheric Admin. SOURCE: U.S. Oceanic and Atmospheric Administration, National Ocean Service, Rockville, MD, Annual Serial DATE: 01/01/86 ABSTRACT: Current predictions for slack water time and maximum current time and velocity for various ports on the Pacific, specifically San Francisco Bav in Northern California. This publication is an "annual", beginning in 1929, and was published under three different headings: U.S. Coast and Geotetic Survey until 1971, National Ocean Survey 1972-1983, and National Ocean Service 1984 to present. KEYWORDS: Coastal Processes, Oceanography & Meteorology nearshore currents, tidal inlets, tides

California, Subregion I, Subregion III, Subregion IV, Subregion V, Eureka Cell, Bolinas Bay Cell, San Francisco Cell Data For Marsden Square #157, Northern California Coast, 1958-60 AUTHOR(S): U.S. National Oceanographic Data Center SOURCE: U.S. National Oceanographic Data Center, Washington, D.C., unpaged computer printout, templates and guide for reading DATE: 01/01/58 ABSTRACT: Computer printout for wave observations taken for Marsden Square 157, 40 N-50 N, 120 W-130 W, Data includes wave amplitude, period, surface current and hydrographic data. KEYWORDS: Coastal Processes, Survey coastal currents, hydrographic surveys, wave climate California, Subregion I Pacific Coast Recreation Area Survey AUTHOR(S): U.S. National Park Service U.S. National Park Service, Department of the Interior, SOURCE: Washington, D.C., 179 pages and appendices DATE: 01/01/59 ABSTRACT: The specific objective of the Pacific Coast survey was to inventory and report on important remaining undeveloped areas, or areas with relatively sparse development, valuable for recre- ation and other public purposes, along the Pacific Coast. The term "recreation" was used in the broad sense to apply to areas of scenic, scientific and historical interest, as well as those valuable for active recreation. KEYWORDS: Survey beaches, coastal erosion, property value/land use, shoreline use, urbanization California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Summary of Synoptic Meteorological Observations, North American Coastal Marine Areas AUTHOR(S): U.S. Naval Weather Service Command SOURCE: Volume 8 area -24 Point Mugu, area 25 - San Francisco, area 26 - Point Arena, 483 pages; U.S. Naval Weather Service Command, Washington, D.C. DATE: 05/01/70 ABSTRACT: The data contained in these tables were obtained from tape data Family 11 (TDF-11), Marine Surface Observations. TDF-11 was primarily funded by the Naval Weather Service Command and selec- ted by NWSED Asheville as the most comprehensive collection of marine surface observations from which to develop a

series of coastal marine summaries. The areas includes Point Mugu, Point Arena and San Francisco, California. KEYWORDS: Oceanography & Meteorology climatology, precipitation, storms/floods, storm waves, wave climate, wind California, Subregion II, Subregion III, Navarro River Cell, San Francisco Cell Letter from the Secretary of the Army AUTHOR(S): U.S. Secretary of the Army SOURCE: U.S. Secretary of the Army, Wahsington, D.C., Document No. 286, House of Representatives, 81st Congress, 1st Session DATE: 07/25/49 ABSTRACT: A letter from USACE Office of the Chief of Engineers, dated February 28, 1949, submitting a report, together with accompanying papers and an illustration, on a review of reports on San Francisco Harbor and Bay, California. Requested by a resolution of the Committee on Rivers and Harbors, House of Representatives, adopted on June 28, 1946. KEYWORDS: Socioeconomics river sediment discharge, tidal inlets, tides California, Subregion III, Bolinas Bay Cell, San Francisco Cell Rivers in California, Russian River AUTHOR(S): U.S. Secretary of the Army SOURCE: U.S. Government Printing Office, Washington, D.C., 81st Congress, Second Session, House Document Number 585, reference book of rivers DATE: 05/09/50 ABSTRACT: A study of the Russian River area, its economic development, climatology, run-off, flood data and improvements, flood control plans, recreation, data on costs and benefits, and proposed plans; maps included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics climatology, institutions/planning/mgmt., property value/land use, river discharge, storms/floods, watersheds California, Subregion II, Russian River Cell Pajaro River Basin, California AUTHOR(S): U.S. Secretary of the Army SOURCE: Letter from the Secretary of the Army, U.S. Government Printing Office, Washington, D.C., House Document No. 491, 88 pages DATE: 01/01/66 ABSTRACT: Report on an interim report on the Pajaro River Basin and a proposed flood control project. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., maps, property value/land use, river discharge, storms/floods, watersheds California, Subregion IV, S. Monterey Bay Cell

Klamath River at and in the Vicinity of Klamath, California AUTHOR(S): U.S. Secretary of the Army

SOURCE: U.S. Department of the Army, Washington, D.C., 70 Pages DATE: 08/29/66 ABSTRACT: Collected correspondence concerning flood protection in Klamath River Vicinity including: Flood Records, Damage Survey, Precipitation Records, Runoff Description, Existing Protective Improvements, Population Analysis, Urbanization, And Cost Estimates of Recommended Improvements. KEYWORDS: Hydrology & Hydraulics, Socioeconomics population, precipitation, stream gaging, storms/floods, urbanization, watersheds California, Subregion I, Klamath River Cell Mad River, Humboldt and Trinity Counties, California AUTHOR(S): U.S. Secretary of the Army SOURCE: U.S. War Department, 90th Congress, 2nd Session, House Document number 359, U.S. Government Printing Office, Washington, D.C. DATE: 07/16/68 ABSTRACT: A letter from the USACE, Office of the Chief of Engineers, Department of the Army, submitting a report, together with papers and illustrations, on an interim report on the Mad River, Humboldt and Trinity Counties, California, for the study involving flood control. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, river discharge, storms/floods, urbanization, watersheds California, Subregion I, Eureka Cell Harbor of Refuge at Point Arena, or Elsewhere on the Pacific Coast, Between San Francisco and Humboldt Bay, California AUTHOR(S): U.S. Secretary of War SOURCE: Letter from the U. S. Secretary of War, 63rd Congress, 3rd Session, House of Representatives, Washington, D.C., Document Number 1369, 39 pages DATE: 12/16/14 ABSTRACT: A letter from the Office of the Chief of Engieeers. Report on preliminary examination for harbor of refuge at Point Arena, or other localities on the Pacific Coast between San Francisco and Humboldt Bay. KEYWORDS: Oceanography & Meteorology, Socioeconomics coastal structures, institutions/planning/mgmt., shoreline use California, Subregion I, Subregion II, Subregion III Mad River, California AUTHOR(S): U.S. Secretary of War SOURCE: U.S. War Department, letter from, 730th Congress, 2nd session, U.S. House of Representatives, Washington, D.C., Document Number 188 DATE: 01/03/34 ABSTRACT: A letter from the Office of the Chief Engineers, United States Army, submitting a report, together with accompanying papers and illustrations,

containing a general plan for the improvement of Mad River, California for the purpose of navigation and develop- ment of its water power control of floods, and the need for irrigation. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, reservoirs, river discharge, storms/floods, watersheds California, Subregion I, Eureka Cell Noyo River and Harbor, California AUTHOR(S): U.S. Secretary of War SOURCE: U.S. War Department, 76th Congress, 3rd Session, House of Representatives, Washington, D.C., Document Number 682, 17 pages DATE: 08/26/37 ABSTRACT: A letter from the Chief of Engineers, on a preliminary examination and survey of Noyo River. Including commerce, fishing industry, projects, and improvements needed. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., maps, property value/land use, river discharge, shoreline use California, Subregion II, S. Ten Mile River Reach Rivers in California, Pajaro River AUTHOR(S): U.S. Secretary of War SOURCE: U.S. Government Printing Office, Washington, D.C., a reference book with data on rivers in California, Congress, Second Session, House Document Number 55 DATE: 01/01/44 ABSTRACT: A report of the Pajaro River including information pertaining to a description of the area, precipitation, run-off, floods, desired improvements, costs, benefits from improvement, and various plans for the river. Includes maps of the area. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., precipitation, property value/land use, river discharge, storms/floods, watersheds California, Subregion IV, Santa Cruz Cell A Preliminary Examination of the Mad River in Humboldt County, California, for Flood Control AUTHOR(S): U.S. War Department SOURCE: USACE, Office of the Chief of Engineers, U.S. War Department, Washington, D.C., Public Hearing DATE: 12/16/37 ABSTRACT: Public hearing involving flood control, waterflow retardation, prevention of soil erosion and runoff of the Mad River.

KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, river discharge, storms/floods, watersheds California, Subregion I, Eureka Cell A Preliminary Examination of the Eel River in Humboldt County, California, for Flood Control AUTHOR(S): U.S. War Department SOURCE: USACE, Office of the Chief of Engineers, U.S. War Department, Washington, D.C., 88 pages DATE: 12/16/37 ABSTRACT: A record of the public hearing of the War Department concerning flood control, runoff and waterflow retardation and soil erosion of the Eel River. One map included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, river discharge, storms/floods, watersheds California, Subregion I, Eureka Cell A Preliminary Examination of the Pajaro River, California, for Flood Control AUTHOR(S): U.S. War Department SOURCE: USACE, Office of the Chief of Engineers, U.S. War Department, Washington, D.C., 75 pages DATE: 01/05/38 ABSTRACT: A hearing concerning a preliminary examination of the Pajaro River for flood control runoff, waterflow retardation, and soil erosion prevention on the watershed. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, river discharge, storms/floods, watersheds California, Subregion IV, Santa Cruz Cell Report of Preliminary Examination of Eel and Mad Rivers in Humboldt County, California, for Flood Control AUTHOR(S): U.S. War Department SOURCE: USACE, Office of the Chief of Engineers, U.S. War Department, Washington, D.C., Exhibits A, B, and C DATE: 05/13/38 ABSTRACT: A record of the preliminary hearing of the Mad and Eel Rivers concerning flood control and runoff and waterflow retardation. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, river discharge, storms/floods, watersheds California, Subregion I, Eureka Cell Preliminary Examination of San Lorenzo River in Santa Cruz County, Calif, for Flood Control & Waterflow Retardation & Soil Erosion Prevention AUTHOR(S): U.S. War Department

SOURCE: USACE, Office of the Chief of Engineers, U.S. War Department; USACE, San Francisco District, San Francisco, CA, 1 volume in a file, various paging, maps, and photographs DATE: 05/27/39 ABSTRACT: This is the report of the preliminary examination of San Lorenzo River for flood control and watershed retardation and soil erosion prevention on the watershed. This is a transcript of the public hearing, with inclosure 1 and exhibits 1 to 5 included, held December 14, 1938. Photos show flood damage conditions and normal conditions. KEYWORDS: Hydrology & Hydraulics, Socioeconomics fires, institutions/planning/mgmt., property value/land use, river discharge, storms/floods, California, Subregion IV, Santa Cruz Cell Fort Funston, California Shore Protection Board, Report on Erosion AUTHOR(S): U.S. War Department; Office of the Chief of Engineers; Shore Protection Board USACE, Office of the Chief of Engineers, Shore Protection Board SOURCE: (Later merged with Beach Erosion Board, NOW, USACE, Coastal Engineering Research Center, Vicksburg, MS) DATE: 12/27/40 ABSTRACT: Study of erosion of the shoreline at the base of the cliffs along the southerly half of the Fort Funston reservation. It includes estimates of the volume of beach drifting sand now present along the 14-mile stretch of coast from Point Lobos to Point San Pedro. KEYWORDS: Coastal Processes beach profiles, coastal erosion, littoral sediment, longshore transport, shoreline changes, shore protection California, Subregion III, San Francisco Cell The Frequency of Flood Producing Rainfall Over the Pajaro River Basin, California AUTHOR(S): U.S. Weather Bureau SOURCE: U.S. Weather Bureau, Hydrometeorological Section, River and Flood Division, in cooperation with the Flood Control Coordin- ating Committee, U.S. Dept. of Agriculture, 13 leaves, 26 plates DATE: 01/10/40 ABSTRACT: This was the first of a series of reports which were intended to furnish to the flood control agencies analyzed rainfall data for use in structual and economic design. KEYWORDS: Hydrology & Hydraulics precipitation, river discharge, storms/floods, watersheds California, Subregion IV, Santa Cruz Cell

Report of the Subcommittee on Beaches and Parks AUTHOR(S): Unruh, Jesse M.; Allen, Bruce; Belotti, Frank P.; Lindsay, Francis С. SOURCE: California State Assembly Interim Committee Reports, Volume 13, Number 22, House Resolution 215, 1957, Assembly of the State of California, Sacramento, CA, 200 pages DATE: 03/01/59 A legislature report that recommended that the Park ABSTRACT: Commission change policies and further recommended that acquisition programs of all state agencies other than the Division of Highways be transferred to the Department of Finance. It also reports that the matter of full consolidation of the recreation- al function be further studied. KEYWORDS: Socioeconomics beaches, growth potential/recreation, institutions/planning/mgmt., property value/land use, shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Summary Report, Beach Erosion Studies, Stinson Beach AUTHOR(S): URS Research Company SOURCE: Prepared for Pillsbury, Madison, & Sutro, San Francisco, California, 14 pages, tables, graphs DATE: 03/09/72 ABSTRACT: Stinson Beach erosion studies, conducted subsequent to the Jan- uary 1971 Golden Gate oil spill, showed that beach profiles were not affected by the beach restoration procedures utilized to remove oil contaminated material. The volume of sand transpor- ted from the beach to deeper water during the study (by natural beach erosion processes) was found to be on the order of 400,000 cubic yards. Along one part of the beach there was more material present in February 1972 than in March 1971. Previous studies, conducted by the U.S. Army Corps of Engineers in 1961, estimated a net removal of 347,000 cubic yards over a similar time frame. KEYWORDS: Coastal Processes beach nourishment/dredging, beach profiles, coastal erosion, offshore/onshore transport, shoreline changes California, Subregion III, Bolinas Bay Cell

Point Arena Cove Pier and Seawall Feasibility Study/Point Arena Launching

Facility Feasibility Study AUTHOR(S): URS/John A. Blume and Associates SOURCE: Prepared for City of Point Arena, California URS/John A. Blume and Associates, Engineers, San Francisco, CA, September 1984 DATE: 01/01/84 ABSTRACT: Feasibility report for pier and seawall at Arena cove including preliminary design for the pier and seawall. The report also includes a brief history of the cove along with design criteria which includes a "Meteorological Table for Coastal Area off Point Arena," wave data at Noyo, tide and storm surge levels, maximum breaking wave, no soils data of any significance, and preliminary costs. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics coastal structures, shoreline use, shore protection, storm surge, tides, wave climate California, Subregion II, S. Ten Mile River Reach, S. Navarro River Reach-A Annotated Bibliography on Tsunamis AUTHOR(S): USACE Beach Erosion Board SOURCE: USACE, Beach Erosion Board, (now USACE Coastal Engineering Research Center, Vicksberg, MS), Technical Memorandum No. 30 DATE: 02/01/53 ABSTRACT: Not reviewed. KEYWORDS: Oceanography & Meteorology tsunamis California, Subregion I, Subregion II, Subregion IV, Subregion V Littoral Studies Near San Francisco Using Tracer Techniques AUTHOR(S): USACE Beach Erosion Board USACE, Beach Erosion Board, (now USACE Coastal Engineering SOURCE: Research Center, Vicksburg, MS), Technical Memorandum No. 131, 60 pages DATE: 11/01/62 ABSTRACT: Discussion of littoral studies done in the San Francisco area using tracer techniques. KEYWORDS: Coastal Processes, Hydrology & Hydraulics beaches, coastal currents, littoral sediment, longshore current, longshore transport, nearshore currents California, Subregion III, Bolinas Bay Cell, San Francisco Cell The Ports of San Francisco, Oakland, Berkeley, Richmond, Upper San Francisco Bay, Santa Cruz, and Monterey, California AUTHOR(S): USACE Board of Rivers and Harbors SOURCE: USACE, Board of Rivers and Harbors, 317 pages, tables, plates, Port Series No. 12, (prepared by U.S. War Department, Washington, D.C.)

DATE: 01/01/27 ABSTRACT: This is # 12 of a series on principal ports of the USA, prepared to meet the needs of the War Dept. in its development of harbors. Extensive information on commerce, origin and destination of traffic, and the amount of business the port can handle are included. KEYWORDS: Socioeconomics aerial photography, coastal structures, maps, property value/land use, shoreline use California, Subregion III, Subregion IV, San Francisco Cell, Santa Cruz Cell, S. Monterey Bay Cell The Tsunami of the Alaskan Earthquake, 1964: Engineering Evaluation AUTHOR(S): USACE Coastal Engineering Research Center SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, Technical Memorandum No. 25, 400 pages with tables, charts and appendices DATE: 05/01/68 Evaluation of the 1964 tsunami. The evaluation is directed ABSTRACT: to an engineering view of the causes, effects, and future protective measures. Α secondary purpose is to evaluate the oceanographic and geophysical nature of tsunami generation. Based on the literature of earlier investigators and on field investigations by the authors, the study gives a picture of what occurred. Analyses by the authors also suggest an explanation of how it occurred. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology geomorphic processes, neotectonics, shore protection, tsunamis California, Oregon, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Littoral Environment Observation Program in California AUTHOR(S): USACE Coastal Engineering Research Center USACE, Coastal Engineering Research Center, Vicksburg, MS, SOURCE: Miscellaneous Paper No. 2-70, 15 pages, Illustrations DATE: 12/30/68 ABSTRACT: This report describes the Littoral Environment Observation (LEO) Program and assembles in one paper the data collected under the program from February through December 1968. LEO is a coopera- tive effort of the State of California and the Corps of Engineers to collect information which will increase under- standing of the littoral processes and physical characteristics of the California Shore. The littoral variables collected under the LEO program include the following beach characteristics: foreshore slope, width and elevation of

berm, presence of cusps and samples of the sediments. The beach material is analyzed for mean and median diameter, standard deviation, skewness, and kurtosis. State KEYWORDS: Coastal Processes, Survey beach profiles, grain size, nearshore currents, tides, wave climate, wind California, Subregion I, Subregion II, Subregion IV Littoral Environment Observation Program AUTHOR(S): USACE Coastal Engineering Research Center SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, 393 pages, computer printout DATE: 01/01/69 ABSTRACT: Results of the USACE's littoral environment observation program. KEYWORDS: Coastal Processes, Survey beach profiles, grain size, nearshore currents, tides, wave climate, wind California, Subregion I, Subregion II, Subregion IV LEO Program - Wave Observations at Prairie Creek Redwoods, Man- chester, Wright's, and Stinson Beaches AUTHOR(S): USACE Coastal Engineering Research Center Unpublished, 1 volume, unpaged, available at University of SOURCE: California, Berkeley, Water Resources Archives DATE: 12/01/71 ABSTRACT: Computer print-out from LEO (Littorial Environment Observations) Program covering wave observations at the above locations for differing periods between 1968-1971. KEYWORDS: Coastal Processes wave climate California, Subregion I, Subregion II, Subregion III, Klamath River Cell, Navarro River Cell, Russian River Cell, Bolinas Bay Cell Wave Climate Comparison of Wave Hindcasts and Shipboard Wave Observations Along the U. S. Pacific Coast AUTHOR(S): USACE Coastal Engineering Research Center SOURCE: USACE, Coastal Engineering Research Center, unpublished letter, 3 pages and figures, available at University of California, Berkeley, Water Resources Archives DATE: 12/18/74 This comparison utilizes deep water wave height climate ABSTRACT: results from shipboard wave observations by seamen during the years 1963-1968, summarized and published by the U.S. Naval Weather Service Command for the U.S. coastal areas delineated and wave conditions hindcast from meteorological data for the vears 1956-1958, prepared under contract for the Corps of Engineers. KEYWORDS: Coastal Processes wave climate

California, Subregion I, Subregion II, Subregion IV, Subregion V Field Estimation of Longshore Sediment Transport Along the California Coast AUTHOR(S): USACE Coastal Engineering Research Center SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, Technical Notes, 4 pages DATE: 03/01/81 ABSTRACT: This technical note describes instrumentation used for gathering wave direction and intensity data. The data is used to estimate longshore transport of sand. It also lists the locations where the wave gages were located. KEYWORDS: Coastal Processes longshore transport, wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V, Santa Cruz Cell Shore Protection Manual; Volumes I & II AUTHOR(S): USACE Coastal Engineering Research Center SOURCE: USACE, Coastal Engineering Research Center, Vicksburg, MS, Forth Edition, U.S. Govt. Printing Office, Washington, D.C., pagings by chapter DATE: 01/01/84 ABSTRACT: This Shore Protection Manual was prepared to assemble in a single two-volume publication guidance on coastal-engineering practices for shore protection. "Coastal Engineering" is defined as the application of the physical and engineering sciences to the planning, design, and construction of works to modify or control the interaction of the air, sea, and land in the coastal zone for the benefit of man for the enhancement of natural shoreline resources. "Shore portection," as used in this Manual, applies to works designed to stabilize the shores of large bodies of water where wave action is the principal cause of erosion. Much of the material is applicable to the KEYWORDS: Coastal Processes beaches, coastal structures, longshore transport, nearshore currents, shore protection, wave transformation California, Subregion I, Subregion II, Subregion IV, Subregion V Assesment of Damage to the California Coastline, Winter 1983 AUTHOR(S): USACE Los Angeles District SOURCE: A Task Force Report prepared by the USACE, Los Angeles District and The State of California, available from USACE, Los Angeles District, Los Angeles, CA

DATE: 04/01/84 ABSTRACT: The coast of California suffered extraordinary damage during the winter season of 1982-83. A sequence of 8 major storms struck the coast in the eight week period from mid-January to mid-March 1983. The waves associated with these storms were exceptional because of their height and long periods. This report describes the storms and the resulting coastal damage and is limited to the damage directly attributable to waves and tides along the shore. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics coastal erosion problems, coastal structures, maps, California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Concepts for Surface Wind Analysis and Record Velocities AUTHOR(S): USACE Missouri River Division SOURCE: USACE, Missouri River Division, Omaha, NE, Civil Works Investigations Project CW-178 DATE: 03/01/59 The objective of this technical bulletin was to present ABSTRACT: preliminary information on: (a) the aerial variation thoughout the United States of maximum observed winds for durations from about one minute (fastest mile) to six hours. (b) seasonal varation of observed maximum winds (c) General relationships between velocity of fastest mile of wind and maximum one - hour velocities. KEYWORDS: Oceanography & Meteorology climatology, maps, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Improvement of Harbors in California 1871-1915 AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, Office of the Chief of Engineers, Washington, D.C. annual report, all volumes available at University of California, Berkeley, Water Resources Archives DATE: 01/01/15 ABSTRACT: This document consists of annual surveys of improvements of harbors in California. Relevant surveys include the following: 1873 - all harbors of California. 1885 - harbors in Oakland, Wilmington of Petaluma Creek and Redwood. 1897 - 1907 harbors south of San Francisco. These surveys were included in the appendices of the annual report of the Chief of Engineers. KEYWORDS: Socioeconomics coastal structures, institutions/planning/mgmt., property value/land use,

shoreline use California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Letter from the Secretary of War AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: U.S. House of Representatives, 73rd congress, 2nd session, Washington, D.C., Document No. 181, 53 pages with plates DATE: 10/14/33 ABSTRACT: A letter from the Acting Chief of Engineers, United States Army, submitting a report, together with accompanying papers and illustrations, on Klamath River, Oregon and California for the purposes of navigation and efficient development of its water power, the control of floods, and irrigation. KEYWORDS: Hydrology & Hydraulics, Socioeconomics growth potential/recreation, precipitation, reservoirs, river discharge, storms/floods, watersheds California, Subregion I, Klamath River Cell Report of Preliminary Examination of Russian River, California, for Flood Control AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, Office of the Chief of Engineers, Washington, D.C., Flood Control Central, Service Files, 4 sections, maps DATE: 05/18/39 ABSTRACT: This is a file containing a copy of a resolution for flood relief for Mendocino County. Includes a map of Russian River, California, compiled by the U.S. Geological Survey; copies of letters pertaining to questions asked in the Russian River flood control hearing September 13, 1938 in Santa Rosa; and a report of a preliminary examination of the River. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., maps, reservoirs, river discharge, storms/floods. watersheds California, Subregion II, Russian River Cell Report upon the Improvement of Rivers and Harbors in the San Francisco, California, District AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/50 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities in 1949. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics

coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Report upon the Improvement of Rivers and Harbors in the San Francisco, California, District AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/51 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities in 1950. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Report on Improvement of Rivers and Harbors in the San Francisco, California, District AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/52 Annual report of the Chief of Engineers, U.S. Army, on Civil ABSTRACT: Works activities in 1951. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Views & Recommendations of the State of California on the Pro- posed Report of the Chief of Engineers, Dept. of the Army, on Beach Erosion Control AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, Office of the Chief of Engineers, Washington, D.C.; prepared with California Department of Public Works DATE: 04/07/52 ABSTRACT: A beach erosion control study of the Pacific coast line, and proposed recommendations for its use. KEYWORDS: Coastal Processes, Socioeconomics beaches, coastal erosion, coastal erosion problems, institutions/planning/mgmt., property value/land use, shoreline changes California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V

Report on the Improvement of Rivers and Harbors in the San Francisco, California, District AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/53 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities in 1953. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion IV, Subregion V Report on the Improvement of Rivers and Harbors in the San Francisco, California, District AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/54 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities, 1954. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion IV, Subregion V Report upon the Improvement of Rivers and Harbors in the San Francisco, California District AUTHOR(S): USACE Office of the Chief of Engineers USACE, San Francisco District; USACE, Office of the Chief of SOURCE: Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/55 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities in 1955. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion IV, Subregion V Report upon the Improvement of Rivers and Harbors in the San Francisco, California, District AUTHOR(S): USACE Office of the Chief of Engineers USACE, San Francisco District; USACE, Office of the Chief of SOURCE: Engineers, U.S. Government Printing Office, Washington, D.C., various pagings

(extract) DATE: 01/01/56 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities in 1956. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion IV, Subregion V Report upon the Improvement of Rivers and Harbors in the San Francisco District AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/57 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, Civil Works activities in 1957. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Report upon the Improvement of Rivers and Harbors in the San Francisco, California District AUTHOR(S): USACE Office of the Chief of Engineers USACE, San Francisco District; USACE, Office of the Chief of SOURCE: Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/58 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities in 1958. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Report upon the Improvement of Rivers and Harbors in the San Francisco District, California AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/59 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities in 1959. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics

coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Report upon the Improvement of Rivers and Harbors in the San Francisco, California, District AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/60 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities in 1960. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Report upon the improvement of Rivers and Harbors in the San Francisco, California, District AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/61 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities, 1961. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Report upon the Improvement of Rivers and Harbors in the San Francisco, California, District AUTHOR(S): USACE Office of the chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/62 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities, 1962. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V

Report upon the improvement of Rivers and Harbors in the San Francisco,

California, District AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/63 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities, 1963. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Report upon the Improvement of Rivers and Harbors in the San Francisco, California, District AUTHOR(S): USACE Office of the Chief of Engineers USACE, San Francisco District; USACE, Office of the Chief of SOURCE: Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/64 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities 1964. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion IV, Subregion V Report upon the Improvement of Rivers and Harbors in the San Francisco District, California AUTHOR(S): USACE Office of the Chief of Engineers USACE, San Francisco District; USACE, Office of the Chief of SOURCE: Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/65 ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on civil works activities in 1965. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Report on the Improvements in the San Francisco, California, District AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, San Francisco District; USACE, Office of the Chief of Engineers, U.S. Government Printing Office, Washington, D.C., various pagings (extract) DATE: 01/01/66

ABSTRACT: Annual report of the Chief of Engineers, U.S. Army, on Civil Works activities, 1966. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, institutions/planning/mgmt., reservoirs, river discharge, shore protection, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V EM 1110-2-3300, Beach Erosion Control and Shore Protection Studies, Includes change dated 2 Feb 71 AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, Office of the Chief of Engineers, Washington, D.C., EM 1110-2-3300, 27 pages DATE: 03/31/66 ABSTRACT: This manual discusses the types of information required in beach erosion studies, the methods employed to obtain such data, and the formulation of a study program for obtaining the information needed to define the beach erosion problems in a study area and to serve as the basis for planning remedial measures. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology, Survey beaches, coastal erosion, coastal erosion problems, longshore current, sedimentation, shore protection California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Russian River, California; A Letter From the Secretary of the Army Transmitting a Letter From the Chief of Engineers, Department the Army AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: U.S. Government Printing Office, Washington, D.C., 39th Congress Second Session, House document No. 518, 317 Pages, tables, illustrations, maps DATE: 10/10/66 ABSTRACT: A review of the reports on the Russian River, California requested by a resolution of the committee on Public Works, House of Representatives. The views of the State of California, the Departments of the Interior, Agriculture, Commerce, Public Health Service, and the Federal Power Commission are included together with the replies of the Chief of Engineers to the State of California, The Secretaries of Interior and Commerce, and the Public Health Service. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, growth potential/recreation, institutions/planning/mgmt., river discharge, storms/floods, watersheds California, Subregion II, Russian River Cell

Report on the National Shoreline Study AUTHOR(S): USACE Office of the Chief of Engineers SOURCE: USACE, Office of the Chief of Engineers, Washington, D.C., 59 pages DATE: 08/01/71 ABSTRACT: The National Shoreline Study found 20,500 miles of the ocean and Great Lakes shores of the United States, Puerto Rico, and the Virgin Tslands undergoing significant erosion. The study fur- ther found that action to halt significant erosion appears justified along 2,700 miles of shore. The cost of constructing suitable protective works for these shores is estimated to be \$1.8 billion. The study suggests that priority attention should be given to 190 miles of shores where continued erosion is most likely to endanger life and public safety. The cost of constructing protective works along these shores was estimated at \$240 million. KEYWORDS: Coastal Processes coastal erosion problems, coastal structures, growth potential/recreation, institutions/planning/mgmt., shoreline changes, shore protection California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Flood Volume Frequency Statistics for Pacific Coast Streams AUTHOR(S): USACE Sacramento District SOURCE: USACE, Sacramento District, Sacramento, CA, 19 pages, illustrations, tables, Technical Bulletin No.3 DATE: 04/28/56 This was the third in a series of technical bulletins ABSTRACT: presenting the results of studies made under Civil Works Investigation Project No 151, Flood Volume Studies West Coast. The primary objective of this project was the establishment of criteria for estimating run-off volume frequencies for streams draining the pacific slopes of the United States. KEYWORDS: Hydrology & Hydraulics river discharge, stream gaging, storms/floods California, Subregion I, Subregion II, Subregion IV, Subregion V Ten Year Storm Precipitation in California and Oregon Coastal Basins TBL-No. 4 AUTHOR(S): USACE Sacramento District SOURCE: USACE, Sacramento District, Sacramento, CA, Technical Bulletin No. 4 DATE: 05/01/57 ABSTRACT: To facilitate storms transposition or storm intensity comparison in the Pacific Coast areas over long distance, the study repor- ted in this

bulletin was devoted to construction of an isohyetal map that is exceeded during general winter - type storms at any location on the average once every 10 years. Report also includes: computation of normal annual precip- itation; ratio of 10 - year storm precipitation to normal annual precititation; and charts of storm precipitation. KEYWORDS: Oceanography & Meteorology climatology, maps, precipitation California, Oregon, Subregion I, Subregion II, Eel River Basin Maps and Profiles AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 26 figures DATE: 01/01/31 ABSTRACT: Collected Maps (Plan, Profile And Drainage Basins) of the Eel River Basin. KEYWORDS: Survey maps, watersheds California, Subregion I, Eureka Cell Report on Flood Control and Runoff and Water Flow Retardation for Salinas Vallev AUTHOR(S): USACE San Francisco District SOURCE: Prepared for U.S. Department of Agriculture by USACE San Francisco District, San Francisco, CA DATE: 12/14/37 ABSTRACT: Report concerning a description of projects in regard to the Salinas Valley flood control, its economic aspects, erosion problems, watershed conditions, local cooperation, and reported damages. Includes maps. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., population, property value/land use, river discharge, storm damage, watersheds California, Subregion IV, S. Monterey Bay Cell Miscelaneous USACE San Francisco, Design Branch File, Bodega Bay (B-3-30) AUTHOR(S): USACE San Francisco District SOURCE: Prepared for USACE, Office of the Chief of Engineers, Washington, D.C., by USACE, San Francisco District, California, 1937, 2nd Endorsement by Shore Protection Board DATE: 02/23/38 ABSTRACT: Describes previous reports, shoreline changes, offshore hvdrographic changes, discussion of proposed plans and recommen- dations for Bodega Bay harbor entrance. KEYWORDS: Coastal Processes, Survey

coastal structures, hydrographic surveys, littoral sediment, shoreline changes, tidal inlets California, Subregion II, Bodega Bay Cell Eel River Flood Damage Map - Preliminary AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 1 Map DATE: 09/01/39 ABSTRACT: A map of the flooded area around the Eel River including flood elevations taken in 1938-39. KEYWORDS: Hydrology & Hydraulics, Survey maps, storm damage, storms/floods California, Subregion I, Eureka Cell Preliminary Examination - Klamath River AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, inclosures 2, 3, and 4, various Pagings & Figures DATE: 11/08/39 ABSTRACT: Documents pertaining to a Public Hearing regarding the need for flood control projects, run-off and waterflow retardation, and soil erosion prevention on the watershed of the Lower Klamath River, California. KEYWORDS: Hydrology & Hydraulics, Socioeconomics property value/land use, river-bed sediment, storm damage, storms/floods, watersheds, watershed sediment California, Subregion I, Klamath River Cell Dredging in Bodega Bay AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 1942, File 11-1-29 DATE: 06/15/42 ABSTRACT: One blue line of hydro survey and areas to be dredged. KEYWORDS: Survey hydrographic surveys California, Subregion II, Bodega Bay Cell Klamath River, California and Oregon, Drainage Basin index map AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Map DATE: 07/20/42 A map of the Drainage Basin for the Klamath River, including ABSTRACT: California and Oregon. KEYWORDS: Hydrology & Hydraulics, Survey maps, watersheds California, Subregion I, Klamath River Cell Flood Control Survey Report - Klamath River California and Oregon AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Volumes I, II, III;

Volume I - 63 pages, Volume II - Appendices, Volume III - Various enclosures DATE: 07/20/42 ABSTRACT: This survey deals with flood control and related matters of Scott Rivershed, an area of 680 square miles, and a nine-mile reach immediately above the mouth of the main stream. KEYWORDS: Hydrology & Hydraulics, Socioeconomics precipitation, river-bed sediment, river discharge, stream gaging, storms/floods, watersheds California, Subregion I, Klamath River Cell, S. Klamath River Reach, Eureka Cell Interim Flood Control Survey Report, Salinas River, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Authorized by public number 738, 22 June 1936 and public number 406 August 28, 1937, serial number 44, appendices also provided I-IV DATE: 01/01/45 In connection with the investigation of the streams, certain ABSTRACT: possibilities of effective bank-protection and channel-training works were developed to fit into any plan of flood control and water conservation. This report is limited to the channel- improvement feature for the river from its mouth on Monterey Bay to its upstream end. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., maps, river discharge, shoreline changes, storms/floods California, Subregion IV, S. Monterey Bay Cell Definite Project Report, Noyo River and Harbor California AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, California, 1946 SOURCE: DATE: 03/08/46 ABSTRACT: Detailed Design for construction of a rubble mound breakwater extending northwesterly from the South headland of Noyo Harbor. Report includes soundings from 1939-45 and 46; assessment of foundation conditions based on 117 probings; and cost estimates. KEYWORDS: Coastal Processes, Socioeconomics, Survey coastal structures, geology, hydrographic surveys, wind California, Subregion II, S. Ten Mile River Reach Bodega Bay Dredging AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, File 11-11-32, 1947 DATE: 05/20/47 ABSTRACT: One blue line of areas to be dredged and hydro survey. KEYWORDS: Survey hydrographic surveys

California, Subregion II, Bodega Bay Cell Report on Preliminary Examination of Harbors for Light-Draft Vessels, Northern California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 1949 DATE: 03/31/49 ABSTRACT: Letters and article relative to small-craft harbors, 1949. Wind Roses at Harbor site. Estimate of preliminary plans and 1949 cost estimates. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics coastal structures, population, shoreline use, wave climate, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Survey Report on Humboldt Bay AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, CA SOURCE: DATE: 02/10/50 Map Description of Shoreline changes. ABSTRACT: KEYWORDS: Coastal Processes, Survey shoreline changes California, Subregion I, Eureka Cell River and Harbor and Flood Control Development in the North Coast Region of California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 16 Pages DATE: 01/01/53 ABSTRACT: Address to the members of the Natural Resource Committee detailing USACE civil works projects in the North Coast Region. Primarily describes progress, proposed costs and future operations. Areas described are: Coyote Valley Project, Crescent City Harbor, Humboldt Harbor and Bay, Noyo River and Harbor, Bodega Bay, San Rafael Creek, Petaluma Creek, Napa River, San Pablo Bay, Mare Island Strait, Richardson Bay, Eel River, Mad River, Klamath River, Novato Creek, Corte Madera Creek. KEYWORDS: Coastal Processes, Hydrology & Hydraulics, Socioeconomics coastal erosion problems, coastal structures, California, Subregion I, Subregion II, Subregion III Project Plan, Completion of Outer Breakwater, Crescent City Harbor, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 1955 DATE: 08/25/55 ABSTRACT: Design of Breakwater Repair and Extension and an additon of an Inner Harbor Breakwater. Report discusses history of Crescent City Breakwater and

storm damage sustained in 1948-1949, and 1949-1950. KEYWORDS: Coastal Processes coastal structures, storm damage, storm waves California, Subregion I, Klamath River Cell Floods of December 1955, and January 1956, in Northern California Coastal Streams AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 137 pages, illustrations, 15 folding maps, photos DATE: 06/01/56 ABSTRACT: An account of the December 1955 and January 1956 floods in the San Francisco District, including a general description of the basins, flood characteristics, rainfall associated with the floods, flood emergency activities of the Corps of Engineers, and the hydrologic, hydraulic, and damage data collected. During this same period floods occurred in the Sacramento and San Joaquin River Basins and their tributaries. KEYWORDS: Hydrology & Hydraulics, Socioeconomics precipitation, property value/land use, river discharge, storm damage, storms/floods, watersheds California, Subregion I, Subregion II, Santa Cruz County, California, Cooperative Beach Erosion Control Study AUTHOR(S): USACE San Francisco District SOURCE: U.S. Congress, Washington, D.C., House Document No. 179, 85th Congress, first session DATE: 02/26/57 ABSTRACT: This survey on beach erosion control recommended riprap seawalls, artificial beach fills, and stone groins. KEYWORDS: Coastal Processes beaches, beach nourishment/dredging, coastal erosion, coastal structures California, Subregion IV, Santa Cruz Cell Design Memorandum No 2., General Design for Half Moon Bay, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, April, 1957 DATE: 04/15/57 ABSTRACT: General Design for construction of two rubble-mound breakwaters 4,400 ft and 4,500 ft long, respectively. The report includes (1) foundation investigation of - 5 probings, 2 - seismic lines 2 - auger holes, and 3 jet probings along the beach, and 4 profiles with survey and samples; (2) geologic section, and (3) wave condition studies. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology coastal structures, geology, hydrographic surveys, shore protection, storm waves, wave climate California, Subregion III, Half Moon Bay Cell

Flood Control and Navigation Projects in North Coast Area of California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, inspection trip of October 1957, Public Works Committee, House of Representatives, 28 pages DATE: 10/01/57 ABSTRACT: Collected descriptions of coastal areas in Northern California. Data included are: watershed definition, drainage estimates, geographic description, expenditures for reconnaisances, reports and existing and recommended flood control, and navigation improvements. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., river discharge, shore protection, stream gaging, watersheds California, Subregion I, Subregion II, General Design Memorandum, Eel River Flood Control Project in Sandy Prairie Region, Humboldt County, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 10/01/58 ABSTRACT: Report of the proposed plan for the construction program for flood control including data on cost estimates, quantities of material, and project features (maps included). KEYWORDS: Hydrology & Hydraulics, Socioeconomics geology, institutions/planning/mgmt., property value/land use, river discharge, storms/floods, watersheds California, Subregion I, Eureka Cell Floods of February-April 1958 in Northern California Coastal Streams AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 56 pages with plates DATE: 08/01/59 ABSTRACT: Brief account of the floods in the San Francisco District which occurred during February and April 1958, including a general description of the major basins, flood characteristics, rainfall associated with the floods, flood emergency activities of the Corps of Engineers, and the hydrologic, hydraulic and damage data collected. KEYWORDS: Hydrology & Hydraulics precipitation, reservoirs, river discharge, storm damage, storms/floods, watersheds California, Subregion I, Subregion II, Subregion IV

Review Report for Flood Control and Allied Purposes on Eel River Humboldt and Mendocino Counties, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, unpublished, 11 pages & figures DATE: 10/01/60 ABSTRACT: A review of information pertaining to flood control projects on the Eel River. Topics include: watershed study, economic factors, improvements needed, special site problems, public hearings and general reconnaissance. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, river discharge, stream gaging, storm damage, storms/floods California, Subregion I, Eureka Cell Miscelaneous USACE San Francisco District, Design Branch File, Bodega Bay Storm Damage AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, August 1961 DATE: 08/01/61 ABSTRACT: Estimates of damage to boats and docks from 1959-1961 due to storms. KEYWORDS: Socioeconomics coastal structures, storm damage California, Subregion II, Bodega Bay Cell Bodega Harbor Condition Survey (2 sheets) AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, September 1961 DATE: 09/07/61 ABSTRACT: Two blue lines of hydro survey of Federal channels and other hydrography and topo in Bodega Bay. KEYWORDS: Survey hydrographic surveys California, Subregion II, Bodega Bay Cell Interim Report for Flood Control and Allied Purposes, Russian River, California, Dry Creek Basin AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, CA, revised SOURCE: November 1961, 50 pages, 4 plates attachment, 10 pages, maps, tables, 2 volumes, Serial No. 141 DATE: 10/01/61 ABSTRACT: The report includes a study of methods to control floods and develop

water resources on Dry Creek. A plan for a multiple- purpose dam and reservoir at the Warm Spring site on Dry Creek is presented. Allied problems and benefits such as water con- servation, recreation, irrigation, hydroelectric power and flow utilization are considered. The control of erosion at critical locations along Dry Creek between the damsite and Mill Street in Healdsburg is included. Sufficient studies were made of the entire Russian River Basin to insure that this improvement would would comprise an essential part of the basin-wide flood KEYWORDS: Hydrology & Hydraulics, Socioeconomics growth potential/recreation, reservoirs, river discharge, storms/floods, watersheds, watershed sediment California, Subregion II, Russian River Cell Humboldt Harbor and Bay Photos AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California DATE: 01/01/62 ABSTRACT: Wave Destruction and Repairs of North Jetty, Humboldt Harbor and Bay, are described. KEYWORDS: Coastal Processes coastal structures, storm damage, storm waves California, Subregion I, Eureka Cell Russian River Basin Economic Base AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, revised February 1963, illustrations, maps, graphs, 5 pages DATE: 07/01/62 ABSTRACT: This is an economic base study of the Russian River Basin. Tncluded are a tabulation of population and land use projections by 20-year periods 1960-2060, and Land-use maps by 20-year periods 1960-2060. KEYWORDS: Socioeconomics growth potential/recreation, maps, population, property value/land use California, Subregion II, Russian River Cell Model Tests of Shoaling and of Dredge Spoil Disposal in San Francisco Bav AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, prepared for Federal Interagency Sedimentation Conference of the Subcommitte on Sedimentation, ICWR, Jackson, Mississippi, 30 pgs with plates DATE: 01/01/63 ABSTRACT: Model tests show the distribution of dredged materials at the disposal site. Discusses management of disposal sites and navigation projects. KEYWORDS: Coastal Processes, Hydrology & Hydraulics

beach nourishment/dredging, nearshore currents, sedimentation, tidal inlets, tides California, Subregion III, Bolinas Bay Cell, San Francisco Cell Half Moon Bay Waves AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California DATE: 04/01/63 ABSTRACT: Data and graphic depiction of wave height and direction at Half Moon Bay. KEYWORDS: Coastal Processes wave climate, wave transformation California, Subregion III, Half Moon Bay Cell Interim Report for Flood Control, Pajaro River Basin, Califor- nia, and Appendices AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, serial number 150 DATE: 06/01/63 ABSTRACT: Discusses flood control on the Pajaro River Basin. Included is a description of the area and maps. KEYWORDS: Hydrology & Hydraulics, Socioeconomics geology, maps, property value/land use, river discharge, storms/floods, watersheds California, Subregion IV, Santa Cruz Cell Survey Report for Flood Control and Allied Purposes, Soquel Creek, Santa Cruz County, California, and Appendices AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 1 volume (various pagings), illustrations, tables, folding plates, (Serial No. 148); revised edition, July 1966, Serial No. 74 DATE: 11/01/63 ABSTRACT: Soquel Creek originates in the Coast Range Mountains about 13 miles northeast of the city of Santa Cruz. It drains an area of about 42 square miles and flows in a generally southerly direct- ion through the towns of Soquel and Capitola into Monterey Bay. The report shows that construction of a multiple-purpose reservoir for flood control, water conservation, and recreation in the middle reaches of the Soquel Creek basin is economically justified. The plan of improvement proposed provides for: a substantial degree of flood protection; an adequate supply of water for domestic and industrial use; and substantial recreat-KEYWORDS: Hydrology & Hydraulics, Socioeconomics growth potential/recreation, institutions/planning/mgmt., reservoirs, river

discharge, storms/floods, watersheds California, Subregion IV, Santa Cruz Cell Interior Report for Water Resources Development, Eel River, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, various pages DATE: 01/01/64 ABSTRACT: The report includes preliminary engineering studies and a report on hydrology, flood damages, water supply requirements, hydro- electric power potential, recreation development, and an overall resource development program. KEYWORDS: Hydrology & Hydraulics, Socioeconomics growth potential/recreation, reservoirs, river discharge, storm damage, storms/floods, watersheds California, Subregion I, Eureka Cell Design Memorandum No 3, General Design Memorandum, Half Moon Bay Harbor, San Mateo County, CA AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 1965 DATE: 01/01/65 ABSTRACT: A summary of studies made concerning adverse wave action occurring in the harbor. Includes "A Sea-Swell Recording Study at Half Moon Bay, California," dated November, 1963, which includes basic wave data for use in operating a model; and study of locally generated wind waves made in April, 1963, which determined that the significant height of waves generated within the harbor approximated the two-foot limitation on wave height imposed by the design critera. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal structures, hydrographic surveys, storm damage, storm waves, wave climate, wind California, Subregion III, Half Moon Bay Cell Wave Action and Breakwater Location, Half Moon Bay Harbor, Half Moon Bay, California AUTHOR(S): USACE San Francisco District USACE, San Francisco District; USACE, Waterways Experiment SOURCE: Station, Vicksburg, Mississippi, Technical Report No. 2-668, 26 pages, Photos, Tables, and Plates DATE: 01/01/65 ABSTRACT: The entire Half Moon Bay Harbor basin, the surrounding breakwater system, and sufficient coastline to ensure accurate simulation of approaching waves, were reproduced in a 1:100- scale hydraulic model equipped with

wave-generating and wave- height-measuring devices. The model was used to determine the optimum location and length of breakwaters necessary to provide, at minimum cost, adequate protection for pleasure craft and fishing boats berthed at the piers during storm wave action. It was concluded that an added section of rubble-mound breakwater, about 1,050 ft long, would provide the desired protection. KEYWORDS: Coastal Processes coastal structures, storm damage, storms/floods, storm waves, wave climate, wave transformation California, Subregion III, Half Moon Bay Cell Plan of Development for Flood Control and Allied Purposes AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, various pagings DATE: 03/01/65 ABSTRACT: This report furnished information on a Plan of Development of Northern California Streams to prevent recurrence of the disastrous flood damages of December 1964. Report encompasses a Plan of Development suggested for early construction to augment flood control works and to develop the area's natural resources. Extent of coverage includes drainage areas of the Sacramento River and of the coastal streams entering the Pacific Ocean between San Francisco and the California-Oregon boundary. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, river discharge, storm damage, California, Subregion I, Subregion II, Subregion III Flood Control and Allied Purposes for Pajaro River Basin, Santa Clara, Santa Cruz, and Monterey Counties, California AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, CA, Progress SOURCE: Report, 14 pages DATE: 05/01/65 ABSTRACT: Study of water resources, problems, and solutions in the Pajaro River Basin, includes flood control, water conservation, and recreation. Also includes a report on various damsites. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, reservoirs, river discharge, storms/floods, watersheds California, Subregion IV, Santa Cruz Cell

Technical Report on Cooperative Beach Erosion Study of Coast of Northern California, Point Delgada to Point Ano Nuevo

AUTHOR(S): USACE San Francisco District; California Department of Water Resources SOURCE: USACE, San Francisco District, San Francisco, CA, Appendix VIII, annexes A, B, C, Serial No. 51 DATE: 06/01/65 ABSTRACT: The purpose of this study was to examine, and to establish a basis for future examination, of the Coast of California from Point Delgada to Point Ano Nuevo with a focus on obtaining data concerning shore processes and on-shore problems to enable the planning and design of effective protective measures. also determining the possible effects of proposed shoreline developments. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics beach profiles, grain size, maps, petrology, shore protection, wave climate California, Subregion II, Subregion III Santa Cruz, California, Sea and Swell Data Collection AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Survey Branch DATE: 06/01/65 ABSTRACT: From 2 November 1964 to June 1965, a wave recording system was operated at Santa Cruz, California by the Survey Branch, U.S. Army Engineer District, San Francisco. The system was the one described in a Sea-Swell Recording Study by Marine Advisers, Inc., dated November 1964. The wave sensor was of the same type as described in the referenced report. The main purpose of this operation was observation and recording of large sea waves capable of causing damage to the existing breakwaters protecting the entrance to Santa Cruz Small Boat Harbor. KEYWORDS: Coastal Processes, Survey storm waves, wave climate California, Subregion IV, Santa Cruz Cell Eel River, California AUTHOR(S): USACE San Francisco District SOURCE: 89th congress, 1st session, House of Representatives, Washington, D.C., House Document No. 234, 133 pages DATE: 07/08/65 ABSTRACT: Collected correspondence regarding the interim report for Water Resources Development on the Eel River California, plus some material from the report itself. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., population, precipitation, river discharge, storms/floods, watersheds

California, Subregion I, Eureka Cell Report on Floods of December 1964, Northern California Coastal Streams -Description of Flood and Damages AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 3 Volumes, various pagings, maps and figures DATE: 12/01/65 ABSTRACT: This report provides a complete description of the December 1964 floods in Northern California. This includes an analysis of the flood producing storm, a general description of the basin in which flooding occurred, an account of the flood emergency activities of the Corps of Engineers, a presentation of hydro- logic and damage data collected and an estimate of the event's impact on the national economy. The report includes maps show- ing areas inundated and the definitive flood plains on the Smith and Klamath Rivers, Redwood Creek and the Mad River, the Eel River, and the Russian River. KEYWORDS: Geomorphology, Hydrology & Hydraulics, precipitation, property value/land use, stream gaging, storm damage, storms/floods, watersheds California, Subregion I, Subregion II, Subregion III, Smith River Cell, Klamath River Cell, Eureka Cell, Russian River Cell Review Report on Bolinas Channel and Lagoon, California, for Navigation AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 1966 DATE: 01/01/66 The report reviews a local plan for improvement of Bolinas ABSTRACT: Lagoon. Topics include expected wave action, littoral drift, sand bypassing, and design of breakwater/jetties. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics coastal structures, geomorphic processes, longshore transport, nearshore currents, wave climate California, Subregion III, Bolinas Bay Cell City of Capitola, California, Beach Erosion Study Reconnaissance Report for Beach Erosion Control AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 1966 DATE: 04/15/66 ABSTRACT: Report contains a summary of available data on costs, benefits, and economic justification for a prospective small beach erosion project at Capitola. The investigation considered the erosion by wave and currents of the

beaches and cliffs. Erosion of Capitola Beach may have been accelerated due to construction of Santa Cruz Harbor in 1962, according to locals. Estimate of sand impoundment by West Jetty and estimate of annual littoral drift are included. KEYWORDS: Coastal Processes cliff sediment, coastal erosion, coastal structures, longshore transport, sand entrapment, shoreline changes California, Subregion IV, Santa Cruz Cell Activities and Plans, Humboldt Bay, California (undated) AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California DATE: 05/01/66 ABSTRACT: A historical overview presented at a symposium. Contains a map of Humboldt Bay with soundings in 1918. KEYWORDS: Survey hydrographic surveys, maps California, Subregion I, Eureka Cell Aerial Photographs of Bolinas, Calif AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 04/04/67 ABSTRACT: 8" X 10" photographs of Bolinas Coast, California. KEYWORDS: Survey aerial photography California, Subregion III, Bolinas Bay Cell Section 103 Reconnaissance Report for Beach Erosion Control, Bolinas, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 1967 DATE: 07/14/67 Report presents a preliminary analysis of the engineering and ABSTRACT: economic feasibility of developing a small beach erosion project for the Bolinas, California, shorelines. Data includes current and historic aerial and ground photography, topographic and hydrographic surveys, and county road damage figures. Problem includes the erosion by waves and currents of beaches and cliffs. Estimates of annual rate of erosion was 1 ft. per year. Study area includes Bolinas Channel to Agate beach. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics aerial photography, hydrographic surveys, nearshore currents, shoreline changes, shore protection, California, Subregion III, Bolinas Bay Cell Crescent City Harbor, California, Model Study Photographs

AUTHOR(S): USACE San Francisco District

SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 07/17/67 ABSTRACT: 8" X 10-1/2" black and white photos of a Crescent City Harbor Model subject to various incident wave conditions. KEYWORDS: Coastal Processes wave transformation California, Subregion I, Klamath River Cell Report on the Flood of December 1966 in Salinas River Basin, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 11/01/67 ABSTRACT: Includes a description of streams, flood characteristics, damage surveys and estimates, and governmental and private actions. Plates and tables included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., maps, property value/land use, river discharge, storm damage, storms/floods California, Subregion IV, S. Monterey Bay Cell Wave Action and Breakwater Location, Noyo Harbor, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District; USACE, Waterways Experiment Station, Vicksburg, Mississippi, Technical Report No. 2-799, 136 pages DATE: 11/01/67 ABSTRACT: Noyo Cove at the mouth of Noyo River, the lower 0.8 miles of Noyo River, and sufficient coastline and offshore bathymetry to permit accurate simulation of storm-wave attack in the area were reproduced in a 1:100scale hydraulic model, equipped with wave-generating and wave-height-measuring devices. The model was used to predict the efficacy of several proposed breakwater plans in providing suitable protection to seagoing lumber barges, which would be moored along a proposed inner-harbor pier. KEYWORDS: Coastal Processes coastal structures, storm waves, wave climate, California, Subregion II, S. Ten Mile River Reach Design for Optimum Wave Conditions, Crescent City Harbor, Crescent City, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 21 pages DATE: 09/01/68 ABSTRACT: Design Model of Crescent City Harbor for a simulation of wave action and its impact on the existing and proposed breakwater. KEYWORDS: Coastal Processes coastal structures, storm waves, wave climate, wave transformation California, Subregion I, Klamath River Cell

California Beach Erosion Studies, Bolinas Bay [and AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 1 volume, maps, folding plates DATE: 01/01/69 ABSTRACT: Includes transparencies entitled "California Beach Erosion Studies, Bolinas Bay." Also enclosed is one set of full size prints of the USACE Bolinas Harbor beach erosion profiles, a map showing the relative positions of the beach study profile line and wave guage marker buoy, and a copy of a plate which was a resurvey of USACE beach profiles. KEYWORDS: Coastal Processes, Survey beaches, beach profiles, coastal erosion, maps, shoreline changes California, Subregion III, Bolinas Bay Cell Resurvey of Corps of Engineers Beach Profiles, Vicinity of Stinson Beach AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, CA, 2-sheets, SOURCE: 1969 DATE: 03/03/69 ABSTRACT: Resurvey of ranges from California Cooperative Beach Erosion Study of June 1965, for Stinson Beach, Marin County. KEYWORDS: Coastal Processes, Survey beaches, beach profiles, shoreline changes California, Subregion III, Bolinas Bay Cell Cooperative Shoreline Processes Study, Photos of Shelter Cove AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Four photos DATE: 08/22/69 ABSTRACT: 3-1/2" X 5" color photos of Shelter Cove, California. KEYWORDS: Survey aerial photography California, Subregion I, S. Spanish Flat Reach Cooperative Shoreline Processes Study, Photos of Mad River Mouth AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, photos DATE: 08/22/69 ABSTRACT: 3-1/2" X 5" color photos taken from a point approximately 1/2 mile south of Mad River Mouth looking toward the northwest. KEYWORDS: Survey aerial photography California, Subregion I, Eureka Cell Detailed Project Report, City of Capitola, Beach Erosion Study, Santa Cruz County, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Draft, 1 volume

(various pagings) charts, tables, maps DATE: 11/01/69 ABSTRACT: The purpose of this report was to present findings on the feasibility of a project for the improvement of Capitola Beach for shore protection and recreational uses. Included are: support- ing economic data, proposed requirements of local cooperation, and a design analysis suitable for preparation of plans and specifications. KEYWORDS: Coastal Processes, Socioeconomics beach nourishment/dredging, beach profiles, institutions/planning/mgmt., longshore transport, shoreline changes, shore protection California, Subregion IV, Santa Cruz Cell General Design Memorandum for Monterey Harbor, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 1969 DATE: 11/01/69 ABSTRACT: Report was concerned with preliminary design for north and east breakwaters at Monterey, CA. Investigations for the project document included a hydrographic - topographic survey; "sparker" survey; geologic reconnaissance for breakwater stone; wave and surge data; model studies; and investigation of probable effects on the shoreline due to addition of the structures. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics coastal structures, growth potential/recreation, hydrographic surveys, longshore transport, storm waves, wave climate California, Subregion IV, S. Monterey Bay Cell Repairs to Humboldt Harbor and Bay Jetties, Humboldt County, CA AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, CA, Brief Design SOURCE: Memorandum, January 1970 DATE: 01/01/70 ABSTRACT: This investigation was intended to develop sufficient engineer- ing and economic data to support recommendations made relative to design of a jetty repair. Model studies, field surveys, mapping, designs and cost estimates were made in sufficient detail to provide the basis for preparation of plans and specifications for the proposed repair work. The U.S. Army Corps of Engineers Waterways Experiment Station designed, constructed and operated a hydraulic model of the seaward end of the jetties in order to determine optimum designs. A hydrographic survey was made during October and November 1969 to determine jetty sections requiring repair, foundation conditions, and quantity estimates. KEYWORDS: Coastal Processes, Socioeconomics

coastal structures, hydrographic surveys, storm waves California, Subregion I, Eureka Cell (Draft) Beach Erosion Control Report on the Shores of the City of Pacifica, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, CA, 37 pages, appendix of 87 pages DATE: 05/01/70 ABSTRACT: A study to determine costs, benefits, economic justification and requirements of local cooperation for various plans to prevent continued erosion along the shoreline of the City of Pacifica. KEYWORDS: Coastal Processes, Socioeconomics beach profiles, coastal erosion, coastal structures, littoral sediment, shoreline changes, shore protection California, Subregion III, San Francisco Cell Review Report, Butler Valley Dam and Reservoir, Mad River, California AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, CA, Statement SOURCE: Information called for by Public Law 91-190, 20 pages DATE: 08/01/70 ABSTRACT: A statement containing environmental background data on the project area and the proposed plan of improvement. Maps inclu- ded. General data includes flood plain evacuation, levees and channel improvements, and reservoir sites. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., maps, reservoirs, river discharge, urbanization, watersheds California, Subregion I, Eureka Cell Cooperative Shoreline Processes Study, Photos of Manresa State Beach AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, photos DATE: 10/09/70 ABSTRACT: 2-1/2" X 3-1/2" color photos of Manresa State Beach. KEYWORDS: Survey aerial photography California, Subregion IV, Santa Cruz Cell Cooperative Shoreline Processes Study, Photos of the Carmel River Mouth AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, photos DATE: 10/09/70 ABSTRACT: 2-1/2" X 3-1/2" color photos of Carmel River Mouth. KEYWORDS: Survey aerial photography California, Subregion IV, Carmel River Cell Cooperative Shoreline Processes Study, Photos at Salinas River Mouth

AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, photos DATE: 10/09/70 ABSTRACT: 2-1/2" X 3-1/2" color photos of Salinas River Mouth. KEYWORDS: Survey aerial photography California, Subregion IV, S. Monterey Bay Cell Cooperative Shoreline Processes Study, Photos at Ano Nuevo Beach AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, photos DATE: 10/10/70 ABSTRACT: 2-1/2" X 3-1/2" color photos of Ano Nuevo Beach from near Waddell Creek. KEYWORDS: Survey aerial photography California, Subregion IV, S. Half Moon Bay Reach-B Cooperative Shoreline Processes Study, Photos at San Gregorio Beach AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, photos DATE: 10/10/70 2-1/2" X 3-1/2" color photos of San Gregorio Beach. ABSTRACT: KEYWORDS: Survey aerial photography California, Subregion III, S. Half Moon Bay Reach-A Aerial Photo of Capitola Beach AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 12/01/70 ABSTRACT: 8"X10" black and white photographs of Capitola Beach, coastal processes, 1945-1970. KEYWORDS: Coastal Processes, Survey aerial photography, shoreline changes California, Subregion IV, Santa Cruz Cell Bolinas Beach Photos AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Miscellaneous Photos, SPNPE-D, 1971 DATE: 01/01/71 ABSTRACT: Miscellaneous ground photos of Bolinas beach and bluffs; January '68 compared to March '69, showing erosion in progress. KEYWORDS: Coastal Processes coastal erosion California, Subregion III, Bolinas Bay Cell Design of Proposed Crescent City Harbor, California, Tsunami Model AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District; USACE, Waterways Experiment Station, Vicksburg, Mississippi, Technical Report H-71-2, 34 pages DATE: 02/01/71

Tests were conducted in a 2-foot-wide flume to aid in ABSTRACT: designing a three-dimensional tsunami model of Crescent City Harbor, CA. The three dimensional model was used to investigate the technical feasibility of a levee-type barrier to protect the city from tsunamis. The investigation was conducted to determine how runup of tsunami waves is affected by modelscale distortion and change in wave period and to determine the approximate crown elevation needed to prevent all but minor over topping of the barrier by tsunami waves. The tests indicated that a barrier crown elevation of +22 feet MLLW KEYWORDS: Coastal Processes coastal structures, shore protection, storm damage, storm surge, tsunamis California, Subregion I, S. Smith River Reach, Klamath River Cell Review Report for Flood Control and Allied Purposes on Smith River Basin California and Oregon AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, CA SOURCE: DATE: 05/01/71 The purpose of this report was to present the results of ABSTRACT: studies on the Smith River Basin concerning evaluation and inspection of potential dam sities. Includes flood damage survey, appraisal of developments in the flood plain, tabulation of high water marks, and topographic and hydrographic surveys. Maps are included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., precipitation, reservoirs, storm damage, storms/floods, watersheds California, Subregion I, Smith River Cell, S. Smith River Reach Main Ship Channel (San Francisco Bar), Dredge Disposal Study for San Francisco Bay and Estuary AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, California, June SOURCE: 1971 DATE: 06/01/71 ABSTRACT: Original plates from current path test. Plates include underwater observation stations, current velocity, current velocity- direction and droque measurements. KEYWORDS: Coastal Processes, Oceanography & Meteorology beach nourishment/dredging, nearshore currents, tidal inlets California, Subregion III, Bolinas Bay Cell, San Francisco Cell National Shoreline Study, California Regional Inventory AUTHOR(S): USACE San Francisco District; Dames and Moore; USACE Los Angeles District

SOURCE: Dames & Moore, San Francisco, CA (including 150 pages in figures and plates) DATE: 08/01/71 ABSTRACT: This report presents an inventory of coastal shoreline characteristics of the State of California, including major bays and estuaries. The coastal characteristics studied relate primarily to erosion produced by waves or other coastal phenomena. KEYWORDS: Coastal Processes, Socioeconomics aerial photography, beaches, coastal erosion, maps, shoreline changes, shoreline use California, Subregion I, Subregion II, Subregion IV, Subregion V Shores of San Francisco County, California, Beach Erosion Study AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 11/01/71 ABSTRACT: An assessment of coastal processes that cause the erosion prob- lems of the San Francisco County shoreline and suggested solut- ions to alleviate the problem. A cost analysis is provided. KEYWORDS: Coastal Processes, Socioeconomics beach profiles, coastal erosion, grain size, longshore transport, shore protection, storm waves California, Subregion III, San Francisco Cell General Design Memorandum for Crescent City Harbor, Crescent City California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, November, 1971 DATE: 11/01/71 Design memorandum for extension of the existing inner ABSTRACT: breakwater 300 ft to the northwest and a T - shaped inner harbor basin. Design criteria includes Annual Swell and Sea Roses, Model Study Results (TR H-68-6), Sources of Stone, and Cost- Benefit Studies. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics coastal structures, wave climate, wave transformation, wind California, Subregion I, Klamath River Cell Plan of Survey for Beach Erosion Study, Bolinas, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, unpublished report, 1972 DATE: 03/01/72 ABSTRACT: A description of required engineering studies to provide a survey of

conditions for a beach erosion study. Little hard data is included. Results are presented in a report of April 30, 1974. The project was cancelled due to environmental constraints. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Survey beaches, cliff sediment, coastal erosion, coastal structures, environmental constraints, shoreline use California, Subregion III, Bolinas Bay Cell Review Report for Flood Control and Allied Purposes- Russian River California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 06/01/72 ABSTRACT: The purpose of this study was to review the past plans and to develop possible new plans for flood control, water supply, recreation, stream pollution control, fish and wildlife protec- tion and enhancement, scenic protection and hydroelectric power generation. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, property value/land use, reservoirs, river discharge, storms/floods, watersheds California, Subregion II, Russian River Cell Beach Erosion Control Report on the Shores of El Granada Beach, San Mateo County, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 182 pages DATE: 11/01/72 ABSTRACT: A report summarizing beach and bluff erosion problems at El Granada Beach, subsequent to construction of the Half Moon Bay Breakwater and to develop a plan for arresting the erosion and restoring the beach. Field surveys and investigations made for this report include hydrographic surveys of the nearshore area to about-36 feet mean lower low water, topographic surveys of areas immediately adjacent to the beach, summer and winter winter beach profile measurements, aerial photography of the study area, review of foundation explorations conducted in connection with the Half Moon Bay Harbor breakwaters, determin- ation of location of sources of material for the proposed KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics, Survey beach profiles, grain size, hydrographic surveys, petrology, shoreline changes, wave climate California, Subregion III, Half Moon Bay Cell

Final Environmental Impact Statement, Operation and Maintenance of Humboldt Harbor and Bay, Jetties and Dredging, Humboldt County, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 1973 DATE: 06/01/73 ABSTRACT: This Environmental Impact Statement addressed the maintenance and rehabilitation of the jetties at the entrance to Humboldt Bay and the maintenance dredging of the five channels in Humboldt Harbor and Bay. KEYWORDS: Socioeconomics aerial photography, environmental constraints California, Subregion I, Eureka Cell Flood Plain Information; Aptos, Trout and Valencia Creeks, City of Aptos, Santa Cruz County, California AUTHOR(S): USACE San Francisco District SOURCE: Santa Cruz County, Santa Cruz, CA, 17 pages, tables, photos, plates DATE: 07/01/73 ABSTRACT: The area covered by this report is subject to flooding from Aptos Creek. The report includes a history of flooding in the Aptos Creek Basin and identifies those areas that are subject to possible future floods. Maps, photographs, profiles, and a cross section are included. The report furnishes a basis to guide flood plain development. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, river discharge, storm damage, storms/floods, watersheds California, Subregion IV, Santa Cruz Cell Flood Plain Information; Soquel Creek, Santa Cruz County, California AUTHOR(S): USACE San Francisco District SOURCE: Santa Cruz County, Santa Cruz, CA; USACE, San Francisco District, San Francisco, CA DATE: 07/01/73 The area covered by this report is subject to flooding from ABSTRACT: Soquel Creek. The properties on the flood plain along this stream are agricultural and residential. The report includes a history of flooding in the Soquel Creek Basin and identifies those areas that are subject to possible future floods. Maps, photographs, profiles, and cross sections are included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, river discharge, storm damage, storms/floods, watersheds California, Subregion IV, Santa Cruz Cell Flood Plain Information - Van Duzen River

AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 07/01/73 ABSTRACT: Reports on flooding from the Van Duzen River and identifies areas that are subject to possible future floods. Maps, photographs, profiles are used. KEYWORDS: Hydrology & Hydraulics river discharge, storms/floods, watersheds California, Subregion I, Eureka Cell Butler Valley Dam and Blue Lake Project, Humboldt County, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Report No. ELR-73-1180, 287 pages DATE: 07/01/73 ABSTRACT: The Butler Valley Dam and Blue Lake project were intended to be a multi-purpose water storage project located in Humboldt County in Northern California. The principal structure would have been a 326-foot high embankment dam located on the Mad River. The use would have been water supply, flood control, and recreation. Principal adverse effects were seen as loss of eleven miles of one of the few remaining small coastal valleys in northern California, loss of habitat for riverine and terrestrial wild- life, and loss of archeological features. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, California, Subregion I, Eureka Cell Final Draft Report on Study of Ocean Beaches Adjoining the Mad River Mouth AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 40 pages, graph. tables, plates DATE: 09/01/73 ABSTRACT: A study of the ocean beaches in the vicinity of the Mad River mouth was initiated in response to inquires regarding the impact of the proposed Butler Valley dam construction upon the beaches. The purpose of the study was to develop a conceptual model of the coastal processes in the area of concern. The study was concerned with material-energy balances on the beaches in the study area and how these balances would be altered by decreased sediment yields from the Mad River. KEYWORDS: Coastal Processes, Survey dunes, longshore transport, offshore/onshore transport, river sediment

discharge, California, Subregion I, Eureka Cell Plan of Study, Dredge Disposal Study for San Francisco Bay and Estuary AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 43 pages, graphs, and figures DATE: 09/01/73 ABSTRACT: A comprehensive study of San Francisco Bay which included water quality, waste disposal, resource planning, navigation channels, disposal methods, and dredging technology. KEYWORDS: Hydrology & Hydraulics, Socioeconomics beach nourishment/dredging, environmental constraints, hydrographic surveys, river discharge, sedimentation, tidal inlets California, Subregion III, Bolinas Bay Cell, San Francisco Cell Brief Letter - Type Report, Bolinas Beach, California AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, California, SOURCE: (unpublished letter report), April, 1974 DATE: 04/30/74 ABSTRACT: A survey of the shores of Marin County, California, from Bolinas Point to the southeasterly end of Stinson Beach Park and such adjacent shores as may be necessary in the interest of beach erosion control and related purposes. Two major problems were investigated. (1) sedimentation within Bolinas Lagoon, and (2) cliff erosion at Bolinas Mesa. A groin exists at the base of "the cliff" and extends seaward. It impounds a large volume of sand. An estimate of bluff sediment contribution was made. KEYWORDS: Coastal Processes, Socioeconomics cliff sediment, coastal erosion, estuarine sediment storage, nearshore currents, sedimentation, California, Subregion III, S. Drakes Bay Reach Flood Control Alternatives for Pajaro Valley, Pajaro River, Salsipuedes and Corralitos Creek AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 19 leaves, illustrations, tables, folding maps, (information pamphlet) DATE: 07/01/74 ABSTRACT: This pamphlet's purpose was to depict the full range of alternatives to improve the Pajaro Valley flood protection system. KEYWORDS: Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., property value/land use, river discharge, storms/floods, watersheds

California, Subregion IV, Santa Cruz Cell San Francisco Bay-Delta Model: Model Verification and Results of Sensitivity Tests AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Water Quality and Waste Disposal Investigation, various pagings, with maps, graphs and illustrations, technical memorandum No. 1. DATE: 01/06/75 ABSTRACT: This technical memorandum was prepared with the assistance of an inter-agency technical committee which was formed expressly to coordinate model testing. Model sensitivity tests were conducted to determine the degree of accuracy that could be expected from tests measuring salinity, tidal elevation, fresh water flow, pumping demands and delta channel flow depletions. KEYWORDS: Hydrology & Hydraulics deltas, river discharge, tidal inlets, tides, watersheds California, Subregion III, Bolinas Bay Cell, Russian River Basin Study - Plan of Study AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 04/01/75 ABSTRACT: The purpose of the plan of study was to provide a management tool to structure a review investigation of the Russian River Basin. It was based upon a broad survey of issues leading to preliminary problem definition and analysis and includes data on population, natural resources, other related projects, and impact assessment. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics environmental constraints, geology, institutions/planning/mgmt., mining, population, river sediment discharge California, Russian River Cell Flood Plain Information, Van Duzen River, Humboldt County, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 20 pages DATE: 07/01/75 ABSTRACT: Report on flood-prone areas of the Van Duzen River to gain knowledge of flood potential and hazards. Includes the history of flooding and identifies potential risk areas. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, institutions/planning/mgmt., property value/land use, river discharge, storms/floods, watersheds California, Subregion I, Eureka Cell

Final Environmental Statement, Maintenance Dredging, Noyo River Channel, Noyo Harbor, Mendocino County, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, Office of the Chief of Engineers, Washington, D.C. DATE: 08/17/75 ABSTRACT: Not reviewed. KEYWORDS: Socioeconomics beach nourishment/dredging, environmental constraints California, Subregion II, S. Ten Mile River Reach Cooperative Beach Erosion Study of Coast of Northern California, Point St. George to Point Lobos AUTHOR(S): USACE San Francisco District SOURCE: USACE Coastal Engineering Research Center and California Department of Water Resources, conducted by USACE, San Francisco District, San Francisco, California DATE: 11/01/75 ABSTRACT: Conducted summer and winter condition beach profile surveys at selected sites including Big and Dry Lagoon(2 profiles to MLLW); Shelter Cove(3 profiles to MLLW); Van Damne Beach Park (2 pro- files to MLLW); Navarro River(2)profiles to -36 feet MLLW); Dillon Beach(2 profiles to MLLW); Drakes Bav(2 profiles to -36 feet MLLW); Thornton Beach(2 profiles to MLLW); Francis Beach(2 profiles to -36 feet MLLW); San Gregorio Beach(2 profiles to MLLW); Ano Nuevo Beach(2 profiles to MLLW); Manresa Beach Park(2 profiles to MLLW); Salinas River(2 profiles to -36 MLLW); Carmel River(2 profiles to -36 feet MLLW). Mechanical analysis of KEYWORDS: Coastal Processes, Geomorphology, Survey aerial photography, beach profiles, grain size, littoral sediment California, Subregion I, Subregion II, Subregion IV, Design Memorandum No. 1, General Design, Humboldt Harbor and Bay, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 1976 DATE: 08/01/76 ABSTRACT: Design of modifications to North Bay, Samoa, and Outer Eureka channels to -35' and providing 1200 ft. x 1200 ft. Anchorage area in North Bay. Report includes a list of prior reports; soils and geology appendix; littoral drift study; discussion of past hydrographic surveys; shoaling study; environmental studies; aerial photography and remote sensing. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics, Survey aerial photography, environmental constraints, estuarine sediment storage, grain size, hydrographic surveys, littoral sediment

California, Subregion I, Eureka Cell

Russian River Basin Study-Phase I Study Report (Preliminary Feasibility) AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 12/01/76 ABSTRACT: This Phase I Study Report is a preliminary feasibility report which defined planning objectives and discussed alternative plans. The report also described the coordination and desires of local interests and other agencies. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics environmental constraints, geology, institutions/planning/mgmt., mining, river-bed sediment, watersheds California, Subregion II, Russian River Cell Final Environmental Statement, Navigation Improvement, Humboldt Harbor and Bay, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 44 pages DATE: 12/01/76 ABSTRACT: This Addendum consists of two appendices, each assessing a disposal site previously discarded during selection of specific disposal areas (Refer Final ES, August 1976, paragraph 6.018). These two disposal sites were reassessed in detail due to the probable elimination of the previouslyaccepted site 13C, described in the Final ES. KEYWORDS: Coastal Processes, Socioeconomics beach nourishment/dredging, environmental constraints California, Subregion I, Eureka Cell Photos of Humboldt Bay AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 09/22/77 ABSTRACT: Aerial Photographs of Humboldt Bay and the adjacent coastline. KEYWORDS: Survey aerial photography California, Subregion I, Eureka Cell Plan of Study, Bolinas Lagoon AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 62 pages DATE: 07/01/78 ABSTRACT: The proposed study was to collect data oriented toward defining the natural progressions as well as determining whether modifi- cations are necessary to achieve the specific goals of enhance- ment and preservation of the ecosystem. The Study addressed rehabilitative dredging and other means of restricting deposition of sediments.

KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics estuarine sediment storage, institutions/planning/mgmt., sand entrapment, sedimentation, shoreline use, urbanization California, Subregion III, Bolinas Bay Cell Detailed Project Report, Crescent City Bluff Erosion Control, Del Norte County, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, Section 103, Small Beach Erosion Control Project DATE: 10/01/78 ABSTRACT: A study of bluff erosion at Crescent City, CA. Significant technical data includes a discussion of beach replenishment, using hydraulic dredge spoils from Crescent City Harbor There is also an assessment of littoral drift in the area. Other data include a description of tides, winds, and waves. A detailed economic analysis of several alternatives is included. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics, Survey beach nourishment/dredging, cliff sediment, coastal erosion, littoral sediment, longshore transport, shore protection California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell Tidal Datums and Information AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California DATE: 04/01/79 ABSTRACT: Includes tabulations of high and low waters and hourly heights for April 1979, at the following Eureka area locations; Hookton Slough, North Spit, and the town of Eureka. A list of tidal datums at the above mentioned locations and a 29 day harmonic analysis is included. There is also a chart of Humboldt Bay which indicates locations where tide observations were recorded. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey tidal inlets, tides California, Subregion I, Eureka Cell Russian River Basin Study - Newsletter AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 5 page newsletter DATE: 06/01/79 ABSTRACT: Purpose of the newsletter was to provide a historical summary of the Russian River Basin Study and an update to interested parti- es on the San

Francisco District's study of water resource and land use problems of the Basin. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, institutions/planning/mgmt., property value/land use, watersheds Subregion II, Russian River Cell Ocean Beach, San Francisco California: Feasibility Report: Beach Erosion Control Study AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 40 pages, photos, maps, diagrams DATE: 07/01/79 ABSTRACT: The purpose of this study was to reevaluate the erosion problem and the alternatives for long-range beach erosion control along the beaches of San Francisco. The scope of the study involved a review of previous studies, analysis of existing data and devel- opment of long-range alternatives for controlling erosion. The study includes a preliminary evaluation of environmental, economic, social and engineering factors. KEYWORDS: Coastal Processes, Socioeconomics coastal erosion, longshore transport California, Subregion III, San Francisco Cell Review Report, Butler Valley Dam and Reservoir, Mad River, California AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, CA, Statement SOURCE: Information called for by Public Law 91-190, 20 pages DATE: 08/01/79 ABSTRACT: A study of the proposed Butler Valley Dam and Reservoir on the Mad River. Included data on physical aspects, water quality, wildlife habitat, and recreation. Also provided data on problems of water resources, environment, wildlife, and the fishery. Plates are included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics environmental constraints, institutions/planning/mgmt., property value/land use, reservoirs, urbanization California, Subregion I, Eureka Cell Detailed Project Report and Environmental Impact Statement, Humboldt Bay-Fields Landing Channel, Humboldt County, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Small Navigation Project, Section 107 Report, January 1980 DATE: 01/01/80 ABSTRACT: This study, prepared at the request of the Humboldt Bay Harbor Recreation and Conservative District, was to determine the feasibility of

improving the existing Federal navigation project at Fields landing in Humboldt Bay. This report documented the planning process and fulfilled the requirements of the National Enviornmental Policy Act. Detailed appendices include economics, geology and soils, design and cost estimates, natural resources, and cultural resources. Geology and Soils Appendix includes hydrography of dredged channels, soil borings in channel areas, grain size curves from borings, liquid phase chemical analyses, bulk sediment analyses and standard elutriate KEYWORDS: Geomorphology, Socioeconomics, Survey environmental constraints, estuarine sediment storage, geology, hydrographic surveys California, Subregion I, Eureka Cell Noyo River and Harbor Model Data AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, miscellaneous information, Noyo Harbor File DATE: 01/01/80 Includes tide information, wave statistics, selected test ABSTRACT: waves, nd foundation conditions. Also attached are Noyo River Water discharge records from October 1969 to September 1977. KEYWORDS: Coastal Processes, Geomorphology, Hydrology & Hydraulics, Oceanography & Meteorology coastal structures, geology, river discharge, tidal inlets, tides, wave climate California, Subregion II, S. Ten Mile River Reach Eel River Basin Resources AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 450 pages, illustrations, maps DATE: 08/01/80 ABSTRACT: This report provides data on the resources, the economic base and the socioeconomic and cultural make-up of the Eel River basin. Original work was limited to erosion and sedimentation. Some of the topics covered are forestry, recreation, fisheries, agriculture, mining, ancillary industries, water and waste water, erosion/sedimentation, human resources and special concerns, and growth policies. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics geology, growth potential/recreation, institutions/planning/mgmt., mining, urbanization, watershed sediment California, Subregion I, Eureka Cell Bolinas Lagoon Sedimentation Study, Draft Report AUTHOR(S): USACE San Francisco District

SOURCE: Report for USACE, San Francisco District, by Parsons, Brinkerhoff, Quade and Douglas, Inc., San Francisco, California, September 1980 DATE: 09/01/80 ABSTRACT: Review of existing reports and hydro surveys for the Bolinas Lagoon and analysis of the erosion/deposition patterns within the Lagoon over the past 10 years. The analysis was based primarily on the 1967 and 1978 hydrographic survey maps of Bolinas Lagoon which were provided by the Corps of Engineers. KEYWORDS: Coastal Processes, Survey estuarine sediment storage, hydrographic surveys, maps California, Subregion III, Drakes Bay Cell Russian River Basin Study, Record of Public Meeting AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA , 110 pages DATE: 01/08/81 ABSTRACT: A public meeting record concerning a Russian River Basin study of recreation, natural resources, sediment influx, flood management, and water quality. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics environmental constraints, growth potential/recreation, storms/floods, watershed sediment California, Subregion II, Russian River Cell Crescent City California, Inner Harbor Basin and Entrance Channel, Feature Design Memorandum and Appendices (draft) AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California DATE: 04/01/81 This report established the basic design for dredging of ABSTRACT: Crescent City Harbor and entrance channel. Information con-tained in the report includes a description of tides, wind waves, tsunamis, geology, sediment transport, deposition, and possible sources of shoaling within the Harbor. Basis for design, construction methods for dredging and disposal, and projected maintenance and economic justification are also discussed. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics coastal structures, grain size, hydrographic surveys, littoral sediment, longshore transport, sand entrapment California, Subregion I, Klamath River Cell Reconnaissance Report-General Investigation Study, Crescent City Harbor, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, 1981 DATE: 07/01/81

ABSTRACT: Reconnaissance Report for Crescent City Harbor Report includes a history of improvements at the Harbor, public concerns, description of shoaling problem navigation efficiency and safety, significant resources and other study area characteristics, formulation of preliminary plans, long term dredging plans, dredging methods and disposal sites, and economic evaluation of plans. KEYWORDS: Coastal Processes, Socioeconomics beach nourishment/dredging, coastal structures, environmental constraints, littoral sediment, sand entrapment, sedimentation California, Subregion I, Klamath River Cell Detailed Project Report and Environmental Impact Satement, Pillar Point Marina, San Mateo County, CA AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Section 107, Small Harbor Project, August 1981 DATE: 08/01/81 ABSTRACT: Study to determine if federal assistance could be provided for the construction of basic navigation improvements at Pillar Point Marina. Study includes detailed appendicies on soils, geology, coastal processes, and benefit determinations. Geotechnical appendex includes the logs of 25 boring and 24 grain-size analyses. Also included are the results of technical shear and O.S. tests. Breakwater design includes stone size and core stone gradations. The coastal processes appendix includes a summary of design tides, wind, wave, currents, and sedimentation. KEYWORDS: Coastal Processes, Geomorphology, coastal structures, grain size, nearshore currents, sedimentation, wave climate, wind California, Subregion III, Half Moon Bay Cell General Design, Navigation Improvements, Bodega Bay, Sonoma County, California AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Design Design Memorandum No. 1, 126 pages plus appendices DATE: 09/01/81 ABSTRACT: The project as authorized in House Document No. 106 provided for the construction of a rock and riprap-protected earth mole in Bodega Harbor having a top width of 60 feet and extending from the shore around the innermost turning

basin, thence parallel to and 250 feet westerly of the existing channel and basin for a total distance of 4,500 feet, with the channel in such a manner as to create a sheltered basin; and a channel 10 feet deep and 100 feet wide extending from the existing project channel easterly along the north side of Doran Beach Spit for a distance of about 3,150 feet to a proposed local small-craft harbor, with suitable flaring at the junction with the existing KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics, Survey coastal structures, geology, grain size, hydrographic surveys, tides, wind California, Subregion II, Bodega Bay Cell Detailed Project Report and Environmental Impact Statement, Humboldt Bay Harbor Section 107, 1960 River and Harbor Act AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 56 Pages DATE: 12/01/81 ABSTRACT: This report is a combined Detailed Project Report (DPR) and Environmental Impact Statement (EIS) intended to document the planning process for development of the selected plan of improvement for Humboldt Bay Harbor. KEYWORDS: Socioeconomics environmental constraints California, Subregion I, Eureka Cell Historical Quantities of Maintenance Dredging at Noyo Harbor Channel, FY 33-FY-81 AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California, Noyo Harbor Files DATE: 01/01/82 ABSTRACT: Historical quantities of maintenance dredging at Noyo Harbor Channel for 1933 - 1981. KEYWORDS: Coastal Processes, Hydrology & Hydraulics river sediment discharge, sedimentation, tidal inlets California, Subregion II, S. Ten Mile River Reach Russian River Basin Study - Northern California Streams Investi- gation - Final Report AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA DATE: 03/01/82 ABSTRACT: A study attempting to develop plans to solve local resource problems of the Russian River Basin; figures, tables, and plates included. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics environmental constraints, geology, institutions/planning/mgmt., mining, river-bed sediment, watersheds

California, Subregion II, Russian River Cell Final Feasibility Report, Crescent City Harbor, California, Shoaling Study AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 46 pages, appendices DATE: 03/01/83 ABSTRACT: The purpose of this study was to identify the extent of the shoaling problem in Crescent City Harbor and to review available reports, to identify the potential source of shoaling materials, and to present alternatives for solving the problems resulting from shoaling. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, littoral sediment, sand entrapment, sedimentation, wave climate California, Subregion I, Klamath River Cell Review of Reports on Humboldt Harbor and Bay, California for Navigation AUTHOR(S): USACE San Francisco District USACE, San Francisco District, San Francisco, California SOURCE: DATE: 06/15/83 ABSTRACT: This report reviewed the reports referred to in the authorizing resolutions and determined the economic feasibility of expan- ding the existing Federal projects by deepening and widening the existing channels, enlarging the turning basin, and providing for an anchorage area. In related economic studies, particular attention was paid to the lumber producing capabilities of the Humboldt Bay tributary area, past and present waterborne commerce in lumber and in petroleum products. KEYWORDS: Coastal Processes, Socioeconomics coastal structures, growth potential/recreation, hydrographic surveys, institutions/planning/mgmt., property value/land use, tidal inlets California, Subregion I, Eureka Cell Report on the Floods of 4-6 January 1982 in the San Francisco and Monterey Bay Areas AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, 80 pages DATE: 12/01/83 ABSTRACT: Report consists of high water mark data and an assessment of the damages incurred. Also presented is information on pre-flood weather conditions, flood magnitudes, emergency operations by the Corps, and post flood data. Charted maps are included. KEYWORDS: Hydrology & Hydraulics, Socioeconomics maps, property value/land use, river discharge, storm damage, storms/floods,

watersheds California, Subregion III, Subregion IV, San Francisco Cell, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Marina County Water District, Monterey County, Section 14, In Progress Report AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, CA, Section 14, Marina County Water District File DATE: 01/01/84 ABSTRACT: The report describes erosion problems at the outfall of the Marina County Water District Waste Water Treatment Plant. High tide in conjunction with storm surge and barometric setup resulted in a high water level of 8.09 feet MLLW in Monterey Harbor. This also corresponded to an estimated 100 year high water mark in San Francisco Bay. Erosion caused 13 feet of sea- cliff retreat during winter 1982-1983. Color photos of eroded bluff face are available. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal erosion problems, offshore/onshore transport, shoreline changes, storm damage, California, Subregion IV, S. Monterey Bay Cell Miscellaneous Photo's, Noyo Harbor (undated) AUTHOR(S): USACE San Francisco District SOURCE: USACE, San Francisco District, San Francisco, California DATE: 12/01/86 ABSTRACT: 2-stereo pairs of photos of existing jetties and 10 miscellaneous black and white photos (8x10) of Noyo River outfall and harbor area. KEYWORDS: Survey aerial photography, coastal structures California, Subregion II, S. Ten Mile River Reach Small-Boat Harbors and Shelters, Pacific Coast, Coast of California AUTHOR(S): USACE South Pacific Division SOURCE: USACE, South Pacific Division, San Francisco, California, information pamphlet, 264 pages, maps DATE: 01/01/49 ABSTRACT: A compilation of data concerning small-craft harbors, anchorages, and points of refuge along the coast of California. Data concerns bathymmetry, locations of structures, & wind diagrams. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey coastal structures, hydrographic surveys, maps, shoreline use, wind California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V

Report of Soil Tests, Beach Sand Samples, El Granada Beach Erosion Study, Vicinity of Half Moon Bay AUTHOR(S): USACE South Pacific Division SOURCE: USACE, South Pacific Division Laboratory, Sausalito, CA, for USACE, San Francisco District, San Francisco, CA DATE: 07/01/65 ABSTRACT: The results of tests are presented on a mechanical analysis plot. The area of concern is in the Vicinity of Half Moon Bay. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment California, Subregion III, Half Moon Bay Cell Report of Soil Tests, Beach Sand Samples AUTHOR(S): USACE South Pacific Division SOURCE: USACE, South Pacific Division Laboratory, Sausalito, CA, for USACE, San Francisco District, San Francisco, CA DATE: 02/01/66 ABSTRACT: The results of gradation curves of beach samples from Moss Landing, Pacifica, Santa Cruz and El Granada beaches. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment California, Subregion III, Subregion IV, San Francisco Cell, Half Moon Bay Cell, Santa Cruz Cell, S. Monterey Bay Cell Report of Soil Tests, Beach Sand Samples; Northern California Corporative Beach Erosion Study AUTHOR(S): USACE South Pacific Division SOURCE: USACE, South Pacific Division Laboratory, Sausalito, CA, for USACE, San Francisco District, San Francisco, CA DATE: 05/01/70 ABSTRACT: Grain-size distribution of sand samples from Northern California beaches. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment California, Subregion I, Klamath River Cell, Eureka Cell, Spanish Flat Cell Report of Soil Tests, Beach Sand Samples, Shores of San Francisco County, California, Beach Erosion Study AUTHOR(S): USACE South Pacific Division SOURCE: USACE, South Pacific Division Laboratory, Sausalito, CA, for USACE, San Francisco District, San Francisco, CA DATE: 12/01/70 ABSTRACT: Grain-size distribution presented on gradation curves for beaches of San Francisco County.

KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment California, Subregion III, San Francisco Cell Report of Soil Tests, Beach Sand Samples, Northern California, Cooperative Beach Erosion Study AUTHOR(S): USACE South Pacific Division SOURCE: USACE, South Pacific Division Laboratory, Sausalito, CA, for USACE, San Francisco District, San Francisco, CA DATE: 07/01/71 ABSTRACT: Grain-size distribution curves of beach sand samples for Northern California beaches. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment California, Subregion III, Subregion IV, S. Half Moon Bay Reach-A, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell National Shoreline Study, California Regional Inventory AUTHOR(S): USACE South Pacific Division; Dames and Moore USACE, South Pacific Division, San Francisco, CA, 103 pages and SOURCE: plates DATE: 08/01/71 ABSTRACT: This report presents an inventory of coastal shoreline characteristics of the State of California, including major bays and estuaries. The coastal characteristics studied relate primarily to erosion produced by waves or other coastal pheno- menon. Inventories have also been prepared for the remainder of the coastline of the United States, including those adjacent to the Atlantic and Pacific Oceans, the Gulf of Mexico, Bering and Beaufort Seas of Alaska. These have been published by other Corps of Engineer Division offices. KEYWORDS: Coastal Processes, Socioeconomics aerial photography, coastal erosion, shoreline changes, shoreline use, shore protection, California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Report of Soil Tests, Beach Sand Samples, Northern California Coopertive Beach Erosion Study AUTHOR(S): USACE South Pacific Division SOURCE: USACE, South Pacific Division Laboratory, Sausalito, CA, for USACE, San Francisco District, San Francisco, CA DATE: 11/01/71 ABSTRACT: Grain-size distribution curves from sand samples of Northern California beaches. KEYWORDS: Coastal Processes, Geomorphology

beaches, grain size, littoral sediment California, Subregion III, Subregion IV, S. Half Moon Bay Reach-A, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell Report of Soil Tests, Northern California, Cooperative Beach Erosion Study AUTHOR(S): USACE South Pacific Division SOURCE: USACE, South Pacific Division Laboratory, Sausalito, CA, for USACE San Francisco District, San Francisco, CA DATE: 06/01/72 ABSTRACT: Grain-size distribution curves for sand samples from Northern California beaches. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment California, Subregion II, Subregion III, S. Ten Mile River Reach, Navarro River Cell, Drakes Bay Cell, San Francisco Cell, Half Moon Bay Cell Report of Soil Tests, Northern California Cooperative Beach Erosion Study AUTHOR(S): USACE South Pacific Division SOURCE: USACE, South Pacific Division Laboratory, Sausalito, CA, for USACE, San Francisco District, San Francisco, CA DATE: 11/01/72 ABSTRACT: Thirty-eight beach sand samples contained in jars were received on 6 November 1972. Identification is shown on Gradation Curve plates. The program included a gradation on each sample. The grain-size distribution of the samples was obstained by the "visual-accumulation-tube" method, in accordance with "Report K, Operator's Manual on the Visual-Accumulation -Tube Method of Sedimentation Analysis of Sands," Revised October 1958. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment California, Subregion II, Subregion III, S. Ten Mile River Reach, Navarro River Cell, Bodega Bay Cell, General Design and EIS, Humboldt Harbor and Bay, California, Navigation Improvements AUTHOR(S): USACE South Pacific Division SOURCE: USACE, South Pacific Division, San Francisco, CA, (AD-A063 790) DATE: 08/01/76 ABSTRACT: Existing tonnages and trends in oceanborne commerce in Humboldt Harbor were evaluated, with a finding that the need for navigat- ion improvements was critical. The economics of the project were completely reevaluated and it was determined that timely initiation of the work of deepening the North Bay Channels from their existing 30 foot depth to their authorized depth of 35 feet was imperative to efficient and safe operation of

the har- bor. Transportation, particularly waterborne transportation, is fundamental to maintenance of a competitive timber industry and the economic well-being of the five county tributary area of Humboldt Bay Harbor. KEYWORDS: Socioeconomics coastal structures, growth potential/recreation, institutions/planning/mgmt., shoreline use, urbanization California, Subregion I, Eureka Cell Analysis of Sediments, Noyo River and Harbor AUTHOR(S): USACE South Pacific Division SOURCE: USACE, South Pacific Division Laboratory, Sausalito, CA, for USACE, San Francisco District, San Francisco, CA DATE: 10/01/80 ABSTRACT: The purpose of the testing was to determine pollutants, grain size distribution and unit weight of sediments in the vicinity of Nayo Harbor. KEYWORDS: Coastal Processes, Geomorphology grain size, littoral sediment, river-bed sediment California, Subregion II, S. Ten Mile River Reach Salinas River Sediment Analysis AUTHOR(S): USACE South Pacific Division Laboratory SOURCE: USACE, South Pacific Division Laboratory, Sausalito, CA, for USACE. San Francisco District, San Francisco, CA DATE: 05/01/51 ABSTRACT: Results of sediment analysis of the Salinas River; graphs included (size frequency distribution). KEYWORDS: Geomorphology, Hydrology & Hydraulics grain size, river-bed sediment California, Subregion IV, S. Monterey Bay Cell Petrographic Report of Forty-Eight Beach Sand Samples, Coopera- tive Beach Erosion Study, Point Delgada to Point Ano Nuevo AUTHOR(S): USACE South Pacific Division Laboratory SOURCE: USACE, South Pacific Division Laboratory, Sausalito, CA, for USACE, San Francisco District, San Francisco, CA, 7 pages, 48 tables, illustrations DATE: 10/01/61 ABSTRACT: A petrographic examination was made of the 48 beach sand samples. Eighteen locations along California's coast were repre- sented with sand samples. Similarity & differences of rock and mineral types, particle shapes along with frequency of occurrences, are summarized in tables. KEYWORDS: Coastal Processes, Geomorphology geology, geomorphic processes, maps, petrology California, Subregion II, Subregion III

Grain Size Distribution, Petrographic Examination, Intertidal Beach Sites,

Crescent City Area AUTHOR(S): USACE South Pacific Division Laboratory SOURCE: USACE, San Francisco District, San Francisco, California DATE: 08/01/82 ABSTRACT: A study of grain size distribution & petrology at selected locations to assist in determining sand migration. KEYWORDS: Coastal Processes, Geomorphology beaches, grain size, littoral sediment, longshore transport, petrology California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell Design for Optimum Wave Conditions, Crescent City Harbor, Crescent City, California AUTHOR(S): USACE Waterways Experiment Station SOURCE: USACE, Waterways Experiment Station, Vicksburg, MS, Technical Report H-68-6, Sponsored by USACE, San Francisco District DATE: 09/01/68 ABSTRACT: Tests were conducted on a 1:125-scale model of Crescent City Harbor and sufficient adjacent coastline and offshore bathymetry to permit generation of waves and wave-front patterns from all significant directions of wave approach to the harbor. The model was used to determine the optimum length and location of an extension, or extensions, to an existing breakwater system that would reduce to a tolerable level the present adverse effects of storm waves on navigation and mooring conditions in the harbor. It was concluded that wave action could be reduced to a satisfactory level in the inner harbor basin by installa- tion of a 400-foot long north-westerly extension of the inner KEYWORDS: Coastal Processes coastal structures, shore protection, storm surge, storm waves, wave climate, wave transformation California, Subregion I, S. Smith River Reach, Klamath River Cell Wave and Surge Conditions After Proposed Expansion of Monterey Harbor, Monterey, California AUTHOR(S): USACE Waterways Experiment Station SOURCE: USACE, Waterways Experiment Station, Vicksburg, MS, Technical Report H-68-9, Sponsored by USACE, San Francisco District, 30 pages, Tables, Photos, Plates, Appendix DATE: 09/01/68 ABSTRACT: A 1:120 scale model of Monterey Harbor, California, and sufficient offshore area to permit generation of the required test waves was used to investigate the arrangement and design of certain proposed harbor improvements

with respect to wave and surge action and to determine current conditions in the navigation entrances to the harbor and its basins. A 56-foot- long wave machine and electrical wave height measuring appara- tus were utilized in model operation. Base tests were conducted with existing prototype conditions installed in the model. Re- sults of tests involving the various improvement plans were com-KEYWORDS: Coastal Processes coastal structures, nearshore currents, storm surge, storm waves, wave climate, wave transformation California, Subregion IV, S. Monterey Bay Cell Theoretics in Design of the Proposed Crescent City Harbor Tsunami Model AUTHOR(S): USACE Waterways Experiment Station USACE, Waterways Experiment Station, Vicksburg, MS, Technical SOURCE: Report H-69-9, sponsored by USACE, San Francisco District, 68 pages With Appendices DATE: 06/01/69 ABSTRACT: The important wave parameters to be considered for tsunami model studies are wave height and period, wave-front orient- ation, and the frequency of occurrence of waves of different heights. The first two of these parameters can be determined by marigraphic measurements or by visual observations; however, wave-front orientation, which is an important variable in the construction and operation of a model, was never accurately ob- served at Crescent City, CA. A digital computer program was written to plot wave rays from three recent epicentral locat- ions to Crescent City to obtain approximate tsunami-front KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis, wave climate, wave transformation California, Subregion I, S. Smith River Reach, Klamath River Cell Design for Optimum Wave Conditions, Crescent City Harbor, Crescent City, California (Appendix A: Results of Supplemental Tests) AUTHOR(S): USACE Waterways Experiment Station SOURCE: USACE, Waterways Experiment Station, Vicksburg, MS, Technical Report H-68-6, Sponsored by USACE, San Francisco District DATE: 06/01/71 ABSTRACT: Tests were conducted on an existing hydraulic model of Crescent City Harbor to determine the optimum length and location of a breakwater system for providing sufficient protection for an expansion to the small-craft harbor capacity. It was concluded that of several plans tested, a breakwater beginning at the +7.5 contour, about 900 feet east of Elk Creek and extending southerly

into the harbor for approximately 1050 feet, then angling south easterly and continuing for an additional 900 feet, in conjunction with a north westerly extension to the existing inner breakwater of 400 feet, would provide the best KEYWORDS: Coastal Processes coastal structures, shore protection, storm surge, storm waves, wave climate, wave transformation California, Subregion I, Klamath River Cell Proposed Jetty-Head Repair Sections, Humboldt Bay, California AUTHOR(S): USACE Waterways Experiment Station SOURCE: USACE, Waterways Experiment Station, Vicksburg, MS, Technical Report H-71-8, Sponsored by USACE, San Francisco District DATE: 11/01/71 ABSTRACT: Tests were conducted on a 1:50-scale model of the North Jetty at Humboldt Bay, California, to determine how economical and stable repair sections can be designed to stop deterioration caused by wave action of the seaward ends of the North and South Jetties at Humboldt Bay. The Model Study determine the dimensions of the largest waves that can attack the proposed structure; the best method of launching 100-ton concrete cubes from the crown of the proposed monolith; the effects on sta- bility of linking armor units; and the optimum shape of armor- unit sections. KEYWORDS: Coastal Processes coastal structures, storm surge, storm waves, California, Subregion I, Eureka Cell Type 16 Flood Insurance Study: Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound AUTHOR(S): USACE Waterways Experiment Station SOURCE: USACE, Waterways Experiment Station, Hydraulics Laboratory, Vicksburg, MS, U.S. Federal Insurance Administration, Department of Housing and Urban Development, 263 pages DATE: 11/01/75 ABSTRACT: Calculations of runup due to seismic sea waves (tsunamis) of distant origin were made for Monterey and San Francisco bays and the greater part of Puget Sound. Those areas which are specifically included and excluded are listed. The values presented are interpreted as being equaled or exceeded on the average of once per 100 (R100) or once per 500 (R500) years. whichever is indicated. All runup values, R100 and R500, are referenced to the mean sea

level datum. The combined effects of astronomical tides and tsunamis are incorporated into the analysis as are certain local effects. The simultaneous occu-KEYWORDS: Coastal Processes, Oceanography & Meteorology storms/floods, storm surge, storm waves, tides, tsunamis California, Subregion III, Subregion IV, San Francisco Cell, Santa Cruz Cell, S. Monterey Bay Cell The CERCULAR, Coastal Engineering Research Center Experimental Facilities AUTHOR(S): USACE Waterways Experiment Station SOURCE: USACE, Waterways Experimental Station, Vicksburg, MS, Volume CERC-84-2, Information Exchange Bulletin, July 1984 DATE: 07/01/84 ABSTRACT: Information Exchange Bulletin on CERC Experimental Facilities. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal erosion, coastal structures, sedimentation, shore protection, wave transformation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Channel Changes at Cross Sections in Redwood Creek, California AUTHOR(S): Varnum, Nick SOURCE: U.S. National Park Service, Redwood National Park, CA, Research and Development, Technical Report 12 DATE: 10/01/84 The purpose of this study was to document the changes in ABSTRACT: channel configuration and elevation of the streambed of Redwood Creek during water year 1982. Also summarizes previous work and provides interpretations of channel response during the nine years of record. KEYWORDS: Geomorphology, Hydrology & Hydraulics aerial photography, river-bed sediment, river discharge, river sediment discharge, stream gaging, storms/floods California, Subregion I, Klamath River Cell Floods of January and February 1969 in Central and Southern California AUTHOR(S): Waananen, Arvi O. SOURCE: U.S. Geological Survey, Water Resources Division, Sacramento, CA, 233 pages DATE: 05/20/69 ABSTRACT: Floods in late January and late February 1969 created havoc in the Santa Clara River and Santa Ynez River basins, and record breaking floods occurred in many other basins in central and southern California. The loss of 51 lives was directly attrib- uted to the floods. Flood damage was estimated to

be more than a quarter of a billion dollars state-wide. The suspendedsediment concentration and discharge observed in several streams greatly exceeded any previously observed. KEYWORDS: Hydrology & Hydraulics, Socioeconomics river discharge, river sediment discharge, stream gaging, storm damage, storms/floods, watershed sediment California, Subregion IV, Subregion V, Carmel River Cell, Point Sur Cell Floods of December 1964 and January 1965 in the Far Western States, Part 2 Streamflow and Sediment Data AUTHOR(S): Waananen, Arvi O.; Harris, D. D.; William, R. C. SOURCE: U.S. Geological Survey, Water-Supply paper 1866-B, U.S. Government Printing Office Washington, D.C., Part 2, 861 pages DATE: 01/01/70 Report on the floods of December 1964 and January 1965; ABSTRACT: present- ing basic hydrologic information records of stage, discharge, sediment concentration, and sediment load. KEYWORDS: Hydrology & Hydraulics maps, river discharge, river sediment discharge, storms/floods, watersheds California, Subregion I, Subregion II, Subregion IV Floods of December in Central and Southern Califorina in Summary of Floods in the United States During 1966 AUTHOR(S): Waananen, Arvi O. SOURCE: U.S. Geological Survey, Water-Supply Paper 1870-D, pages D78-D91 DATE: 01/01/71 ABSTRACT: Rains of December 1966 caused flooding in coastal basins in Monterev Bay and south past the Mexican border. Peak discharges and stages and the maximum perviously recorded flood are given for rivers in the Big Sur, Carmel, Salinas, and Pajaro River basins. KEYWORDS: Hydrology & Hydraulics precipitation, river discharge, stream gaging, storms/floods, watersheds California, Subregion IV, Subregion V, Santa Cruz Cell, S. Monterey Bay Cell, Carmel River Cell, Point Sur Cell Floods from Small Drainage Areas in California- A Compilation of Peak Data, October 1958 - September 1973 AUTHOR(S): Waananen, Arvi O. SOURCE: U.S. Geological Survey, Department of the Interior, Water Resources Division, Sacramento, CA, 260 pages (1011-01) DATE: 12/12/73 ABSTRACT: Report of a compilation of annual peak discharges at 332 sites in

California and of flood frequency for small streams. Also includes summary of storm precipitation and run-off, graphs and tables and one map included. KEYWORDS: Hydrology & Hydraulics precipitation, river discharge, storms/floods, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Magnitude and Frequency of Floods in California AUTHOR(S): Waananen, Arvi O.; Crippen, J. R. SOURCE: U.S. Geological Survey, Water-Resources Investigation 77-21, 96 pages DATE: 01/01/77 ABSTRACT: The magnitude and frequency of floods at both gaged and ungaged drainage areas in California, for any recurrence interval from 2 to 100 years, can be estimated using the method presented. Equations relating flood magnitudes of selected frequency to basin are given. Characteristics such as drainage area, pre- cipiatation, and altitude were developed for six regions in the State. The correct variables to plug into the equation for each of the six regions are given. The regression equations were developed for streams that have natural flow or flows not substantially affected by storage. Also included are tables of maximum recorded discharges and of basin characteristics. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging, watersheds California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Floods of January and February 1980 in California AUTHOR(S): Wahl, K. C.; Crippen, J. R.; Knott, J. M. SOURCE: U. S. Geological Survey, Open-File Report 80-1005, 52 pages DATE: 01/01/80 The storms of January-February 1980 caused significant ABSTRACT: flooding over most of California. The storm of mid-January covered the entire State, but most of the flooding was caused by runoff from the Sierra Nevada and the Sierra foothills; subsequent storms primarily affected southern California and coastal areas north- ward to San Francisco. This report includes a summary of peak discharges at selected stream-gaging stations for the peak flows of 1980 and the previous maximum peak flows. The data in this report was preliminary; final discharge data is published in the annual series "Water Resources Data for California". No sediment data is included for central and northern California.

KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging, storms/floods California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V The Sediments in the Head of Carmel Submarine Canyon AUTHOR(S): Wallin, Steven R. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 96 pages DATE: 12/01/68 Carmel Submarine Canyon is cut into the Santa Lucia ABSTRACT: granodiorite formation and is the only canyon on the California coast which is cut in granite rock. The innermost head of the canyon exhibits a wide, bowl-shaped appearance, not unlike a glacial cirque. Much of the terrace and upper canyon sides are covered by coarse sand while the interior of the canyon head is covered with fine sand. The chief source of sediments is coarse sand which is littorally transported from the mouth of Carmel River. This sand enters the canyon by way of three 'rivers of sand' which extend over the canyon rim and down the slopes. Additional transport of sediment within the canyon head may be the result of slumps and slides lubricated by decomposition of KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology geology, grain size, littoral sediment, river sediment discharge, sedimentation, submarine canyons California, Subregion IV, S. Monterey Bay Cell, Carmel River Cell Area Burned by Wildfire in California Watersheds 1940 - 1959 AUTHOR(S): Wallis, James R.; Bowden, Kenneth L.; Lent, J. D. SOURCE: U.S. Forest Service Research Note, U.S. Forest Service, Berkeley, CA, (PSW - 30)DATE: 01/01/63 ABSTRACT: Uniform fire histories have been compiled for 522 watersheds and 110 hydrographic regions. The data sources, limitations, and availability are discussed. Characteristics of the fire inventory and a summary of watershed data are presented. A map is included. KEYWORDS: Hydrology & Hydraulics fires, maps, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V A Factor Analysis of Soil Erosion and Stream Sedimentation in Northern California

AUTHOR(S): Wallis, James R.

University of California, Berkeley, Ph.D. thesis, 141 pages SOURCE: DATE: 01/07/65 ABSTRACT: Soil erosion and stream sedimentation are two of the major problems of northern California wildlands. This study documented the magnitude and nature of the problem for a small part of Humboldt County. This study represents a quanitative evaluation of the problem. It attempts to index the agents that are contributing to the erosion, and to predict by means of equations the results of various combinations of these factors, and to point out where especially damgerous combinations have occurred, or are likely to occur in the future. KEYWORDS: Geomorphology, Hydrology & Hydraulics precipitation, river-bed sediment, river discharge, river sediment discharge, watersheds, watershed sediment California, Subregion I, Eureka Cell California's Muddy Streams - Are They a Water Problem That We Should Solve? AUTHOR(S): Wallis, James R. SOURCE: Review Craft, unpublished, 43 pages, available at the University of California, Berkeley, Water Resource Archives DATE: 06/13/67 ABSTRACT: In recent history the suspended sediment loads of many streams draining northwestern California's mountains has greatly increased. The increases in stream debris loads have, and are, resulting in external effects and diseconomies within and out- side of the region. For long range evaluation of this potential water problem, it was suggested that a North Coastal River Basin Commission be established under authority of the Federal Water Resources Planning Act. At the state level, changes were recommended in the wording and administration of the State Forest Practices and Water Quality Control Acts. KEYWORDS: Geomorphology, Hydrology & Hydraulics estuarine sediment storage, institutions/planning/mgmt., reservoirs, river-bed sediment, river sediment discharge California, Subregion I, Subregion II Erosion and Sediment in California Watersheds: A Study of Institutional Controls AUTHOR(S): Weatherford, Gary; Coats, Robert; Bachus, Irving; Downs, George SOURCE: California Water Resources Control Board, Sacramento, CA, 325 pages DATE: 06/01/79 ABSTRACT: Study to find ways to strengthen the responses of government

agencies to erosion and sedimentation problems in California. The research was part of the "208" program, the water quality management planning program authorized in 1972 by Section 208. The objectives of the research were to summarize the physical erosion and sedimentation problems, identify institutional causes underlying those problems, evaluate existing programs, and recommend institutional changes to improve controls. KEYWORDS: Geomorphology, Hydrology & Hydraulics, Socioeconomics institutions/planning/mgmt., remote sensing, sedimentation, watersheds, watershed sediment California, Subregion I, Subregion II, Subregion IV, Subregion V Field Trip Guide, Coastal Tectonics and Coastal Geologic Hazards in Santa Cruz and San Mateo Counties, California AUTHOR(S): Weber, Gerald E.; Lajoie, Kenneth R.; Griggs, Gary B. SOURCE: Geological Society of America, Sordilleran Section, 75th Annual Meeting, San Jose, CA, 187 pages & maps DATE: 04/09/79 The guidebook focuses on the deformation of marine terraces, ABSTRACT: the San Gregorio fault zone, and marine erosion in Santa Cruz and San Mateo Counties. Articles include "Erosion Along the Northern Santa Cruz County Coastline"; "Stratigraphic Contrasts Across the San Gregorio Fault, Santa Cruz Mountains, Westcentral California"; "Summary of the Alpine Geophysical Associates Seismic Profiling Survey"; "Form Genesis and Deformation of Central California Wave Cut Platform"; and "Quatsumary Tectonics of Coastal Santa Cruz and San Mateo Counties, California, As indicated by Deformed Marine Terraces and Alluvial Deposits". KEYWORDS: Coastal Processes, Geomorphology coastal erosion, coastal erosion problems, geology, geomorphic processes, neotectonics, petrology California, Subregion III, Subregion IV, San Francisco Cell, Half Moon Bay Cell, S. Half Moon Bay Reach-A, S. Half Moon Bay Reach-B, Santa Cruz Cell Changes in Beach Sediment Supply and Coastal Erosion Rates, Near Point Ano Nuevo, San Mateo County, California AUTHOR(S): Weber, Gerald E. SOURCE: Weber and Associates, Geological Consultant, Santa Cruz, CA, The Geological Society of America, Cordilleran Section, 75th Annual Meeting, San Jose, CA, (GEOREF 952789 79-35355) DATE: 04/09/79 ABSTRACT: Not reviewed. KEYWORDS: Coastal Processes, Geomorphology coastal erosion, dunes, littoral sediment, longshore transport, shoreline

changes, wind transport California, Subregion III, Subregion IV, S. Half Moon Bay Reach-A, S. Half Moon Bay Reach-B Amino Acid Racemization Age Estimates for Pleistocene Marine Deposits in the Eureka-Fields Landing Area, Humboldt County, California AUTHOR(S): Wehmiller, J. F.; Kennedy, G. L.; Lajoie, K. R. SOURCE: U.S. Geological Survey, Open-File Report 77-517, 25 pages DATE: 01/01/77 ABSTRACT: Amino-acid enantiomeric (D/L) ratios in fossil Saxidomus, a thick-shelled aragonit clam, were used to estimate the age of sedimentary deposits at four localities in the Eureka-Fields Landing area of the Humboldt Bay region, California. This method yields age estimates of 180,000 to 280,000 years for exposed and slightly deformed bay and estuarine deposits. KEYWORDS: Geomorphology geology, neotectonics California, Subregion I, Eureka Cell Offshore Surfical Geology of California, Map sheet 26 AUTHOR(S): Welday, Edward E.; Williams, John W. California Division of Mines and Geology, Sacramento, CA SOURCE: DATE: 01/01/75 ABSTRACT: Map sheet 26 consists of 3 plates. Plate 1-general description of map's content, explanation and legend. Plate 2-West Half (Northern California, Oregon border to Pescadero, San Mateo County, scale 1:500,000). Plate 3-East Half (Southern Calif., San Mateo County to California-Mexico Border, scale 1:500,000) KEYWORDS: Geomorphology geology, maps, submarine canyons California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Measuring Longshore Transport With Tracers AUTHOR(S): White, T. E.; Inman, D. L. SOURCE: Chapter 13 in R. J. Seymour (Ed.) Nearshore Sediment Transport, Pleneum Press, New York, NY DATE: 01/01/85 ABSTRACT: Not Reviewed. KEYWORDS: Coastal Processes longshore transport California Seasonal Variations of Coastal Currents off the Oregon- Northern California Coast AUTHOR(S): Whitson, William F. SOURCE: U.S. Naval Postgraduate School, Monterey, CA, Master's Thesis, 50 pages

DATE: 06/01/72 ABSTRACT: Seasonal longshore flow patterns were examined at four points along the Oregon-northern California coast. Summer and winter activity was examined as far seaward as 25 nautical miles and as deep as 200 meters. Long-term mean hydorgraphic data were used to determine geostrophic velocities. A nearshore baroclinic southward flow was observed at each of the points during the summer. Winter currents are generally very small and largely barotropic in nature. Seasonal volume transports are presented based on data from moored current meters. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Survey coastal currents, hydrographic surveys, longshore current, longshore transport, nearshore currents, tides California, Subregion I, Subregion II, Subregion III An Analysis of Data from Wave Recorders on the Pacific Coast of the United States AUTHOR(S): Wiegel, Robert L. SOURCE: University of California, Berkeley, Department of Engineering, Fluid Mechanics Laboratory, 5 leaves, illustrations (HE-116-289) DATE: 02/02/49 ABSTRACT: The wave heights and periods from wave recorders installed off Point Sur, California and Heceta Head, Oregon were compared for the period from April 1947 until June 1948. These data, together with some obtained at Point Arquello, California, showed that the ratio of the maxium wave recorded each day to the average of the highest ten per cent for that day was 1.46 and the ratio of the average of the highest ten percent to the average of the highest one-third of the waves each day was 1.29 for any of the given locations along the Pacific Coast. It was also found that the average period of the swells (i.e., exclud- ing the local storm "chop") was twelve seconds. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion V, Point Sur Cell Some Wave Measurements Along the California Coast AUTHOR(S): Wiegel, Robert L.; Kurr, J. SOURCE: University of California, Berkeley, 9 pages, manuscript, tables, available at University of California, Berkeley, Water Resources Archives DATE: 01/01/55 ABSTRACT: Presents data on the heights and periods of waves measured at

Davenport, California, between July 1953 and November 1954. Most of these data were measured by means of a surface-type wave gage. Certain results, expressed in terms of the ratios of max- imum, average of the highest one-tenth and mean wave heights to the average of the highest one-third of the waves for specified time intervals, are compared with similar published data obtained by bottom pressure recorders. These ratios were found to be lower than the ratios from the bottom pressure recorder records. In addition, a few month's wave records are presented for Pt. Arguello, Pt. Sur, and Pt. Pinos, California. KEYWORDS: Coastal Processes, Oceanography & Meteorology wave climate California, Subregion IV, Subregion V, S. Half Moon Bay Reach-B, S. Monterey Bay Cell, Carmel River Cell, Point Sur Cell Wave Transformation in Shoaling Water AUTHOR(S): Wiegel, Robert L.; Fuchs, R. A. Transactions, American Geophysical Union, Washington, D.C., SOURCE: Vol. 36, No. 6, pages 975-984, tables, diagrams DATE: 12/01/55 ABSTRACT: A series of wave-recorders were installed from the surf zone to a point nearly a mile offshore to study the transformation of waves in shoaling water. Examples of data taken by the recor- ders are presented, and the records are correlated with one another. The theory for waves travelling in shoaling water is given, and a table is presented for use in predicting the theoretical travel time for periodic waves on beaches of small con- stant slope. From the data obtained, it appears that under favorable circumstances wave records obtained in water as deep as 81 ft. (below MLLW) could be correlated with records obtained in the vicinity of the surf zone in 12 ft. of water, the recorders being located nearly 4200 ft. apart. Travel time is KEYWORDS: Coastal Processes wave climate, wave transformation California, Subregion IV, S. Half Moon Bay Reach-B Oceanographic Engineering AUTHOR(S): Wiegel, Robert L. SOURCE: Prentice-Hall International Series in Theoretical and Applied Mechanics, Fluid Mechanics Series, Prentice-Hall, Inc., Englewood Cliffs, N.J., 532 pages DATE: 01/01/64 ABSTRACT: Textbook describing theories used in oceanographic engineering.

Topics include: wave theory, storm and tsunami oscillations, coastal structures effect on waves, wave transformation, wave forces, tides, currents, sea level changes, shore processes, functional design of sturctures, moorings. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal structures, storm surge, tides, tsunamis, wave climate, wave transformation California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Possibility of Tsunamis at Bodega Head and Forces Exerted by Such Tsunamis AUTHOR(S): Wiegel, Robert L. SOURCE: Report by Wiegel (individual) available at University of California, Berkeley, Water Resources Archives, M-4825, 30 pages DATE: 09/01/64 Report on the possibility of Tsunamis activity in Bodega Bay. ABSTRACT: Strength graphs and maps included. KEYWORDS: Coastal Processes, Oceanography & Meteorology maps, shore protection, tsunamis California, Subregion II, Bodega Bay Cell Protection of Cresent City, California from Tsunami Waves AUTHOR(S): Wiegel, Robert L. SOURCE: Crescent City Redevelopment Agency, Crescent City, CA, 114 Pages DATE: 03/05/65 ABSTRACT: A study on the determination of future Tsunamis in Crescent City. In the form of the numerical probability of waves of a given height occuring in a given number of years. This will make it possible to determine the economics of a plan for the protection of a specific town. Maps and diagrams are included. An appendix also follows on the modern design and construction of dams and dikes built with asphalt. KEYWORDS: Coastal Processes, Oceanography & Meteorology, Socioeconomics coastal structures, institutions/planning/mgmt., shore protection, tides, tsunamis California, Subregion I, S. Smith River Reach, Klamath River Cell Seismic Sea Waves (Tsunamis) AUTHOR(S): Wiegel, Robert L. Reprinted from "Geologic Hazards and Public Problems" May 27-SOURCE: 28, 1969, Conference Proceedings, available at University of California, Berkeley, Water Resources Archives DATE: 05/27/69 ABSTRACT: General discussion of tsunami characteristics, relationships to seismic movements, and statistics on property damage and loss of life. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology neotectonics, property value/land use, storm damage, tsunamis

California, Subregion I, Subregion III, S. Smith River Reach, Klamath River Cell, San Francisco Cell Fluid Mechanics of the Nearshore Zone AUTHOR(S): Wiegel, Robert L. SOURCE: Australasian Hydraulics and Fluid Mechanics Conference, Adelaide, 1977; Reprint of paper archived at University of California, Berkeley, Water Resources Archives DATE: 12/01/77 ABSTRACT: Information is presented on the present state of knowledge of some aspects of the fluid mechanics of the nearshore zone. The nearshore zone is defined as the region of the ocean bounding the coast, with a width greater than that of the surf zone but not nearly as wide as the continental shelf. The fluid mechanics involved in this region are quite complicated. KEYWORDS: Coastal Processes longshore transport, nearshore currents, wave transformation California, Subregion III, Subregion IV, Subregion V Sand-Sized Sediment from the Delgado and Monterey Deep-Sea Fans AUTHOR(S): Wilde, Pat SOURCE: Geological Society of America, Boulder, CO, Special Paper 82, pages 224-225 DATE: 01/01/65 Not reviewed. ABSTRACT: KEYWORDS: Coastal Processes, Geomorphology deltas, geomorphic processes, grain size, littoral sediment, offshore/onshore transport, submarine canyons California, Subregion I, Subregion IV, Spanish Flat Cell, Santa Cruz Cell, S. Monterey Bay Cell Recent Sediments of the Monterey Deep - Sea Fan AUTHOR(S): Wilde, Pat SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Tech. Report HEL-2-13, 155 pages DATE: 05/01/65 ABSTRACT: The Monterey deep-sea fan is an arcuate wedge of sediment that occupies 100,000 square kilometers of the floor of the Pacific Ocean at the base of the continental shelf off the coast of central California. Forty-six gravity cores and three piston cores of sediments from the upper surface of the Monterev fan and adjacent regions are the primary sources of data for lithologic and

mineralogic studies of the fan. Two parallel submarine channels (Ascension and Monterey east), which flow respectively out of the mouths of the Ascension and Monterey canyons, cut into the smooth surface of the fan and extend approximately 300 kilometers to the outer edge of the fan. Turbidity currents, which flow down the submarine canyons and KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology deltas, geomorphic processes, grain size, littoral sediment, offshore/onshore transport, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Estimates of Bottom Current Velocities from Grain Size Measure- ments for Sediments from the Monterey Deep-Sea Fan AUTHOR(S): Wilde, Pat SOURCE: Proofs Galley Reprint from "Ocean Science and Engineering" 1965. Volume 2, pages 718-727: Transactions of the Joint Conference, June 1965, Washington, D.C. DATE: 06/01/65 ABSTRACT: Paper presented at the Joint Conference of the Marine Technology Society and American Society of Limnology and Oceanography. Used the relationship w=ua, where w is the settling velocity; u, the current velocity; and a, the bottom slope to predict the grain size of sediment carried in the 1929 Grand Banks turbidity current. KEYWORDS: Coastal Processes, Oceanography & Meteorology deltas, grain size, littoral sediment, offshore/onshore transport, submarine canyons California, Subregion IV, Recent Sediments of Bolinas Bay, California. Part C. Interpre-tation and Summary of Results AUTHOR(S): Wilde, Pat; Isselhardt, C.; Osuch, L.; Yancey, T. University of California, Berkeley, Hydraulic Engineering SOURCE: Laboratory, Report No. HEL-2-23, 86 pages, Water Resources Asbstracts (028246 W71-06929), Minneapolis, MN DATE: 12/01/69 ABSTRACT: Samples of marine sediments and shore rocks from Bolinas Bay, California, were analyzed for grain size and heavy mineral content. The work indicated that nearshore glucophane and jadeite occur in locally high concentrations; distribution patterns of the heavy minerals shows a tongue of high concentrations of minerals that have a granitic source extending northwest from the San Francisco Bay, flanked on the north and northeast by increasing

landward concentrations of Franciscan Metamorphic Minerals; and the major source of heavy minerals is the San Francisco Bay. KEYWORDS: Coastal Processes, Geomorphology grain size, littoral sediment, longshore transport, nearshore currents, petrology, river-bed sediment California, Subregion III, S. Drakes Bay Reach, Bolinas Bay Cell, San Francisco Cell Sediment Distribution and It's Relations to Circulation Patterns in Bolinas Bay, California AUTHOR(S): Wilde, Pat; Yancy, T. SOURCE: Proceedings 12th Coastal Engineering Conference, American Society of Civil Engineers, New York, NY DATE: 09/01/71 ABSTRACT: Grain size and heavy mineral analyses of 6 cliff, 12 beach, and 44 marine sediment and rock samples from Bolinas Bay and its surrounding drainage area were done as part of a long term study of sediment transport on the contintental shelf off Central California. This report summarizes a comprehensive study of Bolinas Bay. KEYWORDS: Coastal Processes, Geomorphology grain size, littoral sediment, longshore transport, nearshore currents, petrology, river-bed sediment California, Subregion III, Bolinas Bay Cell Recent Sediments of the Central California Continental Shelf Pillar Point to Pigeon Point, Part C. Interpretation and Summary of Results AUTHOR(S): Wilde, Pat; Lee, J.; Yancey, T.; Glogozowski, M. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Report No. HEL-2-38, 90 pages, (AD-773 464) DATE: 10/01/73 ABSTRACT: Grain size, heavy mineral, and organic content analyses of 43 marine and 9 intertidal and fluvial samples plus data from 28 marine samples from a previous study form the data interpretated in this report for the area landward of 90 meters depth (50 fathoms) from Pillar Point to Pigeon Point, California, between the Golden Gate and Monterey Bay. KEYWORDS: Coastal Processes, Geomorphology grain size, littoral sediment, longshore transport, nearshore currents, petrology, river-bed sediment California, Subregion III, Half Moon Bay Cell, Catalogue of Sediment Samples of the Hydraulic Engineering Research Laboratory, University of California at Berkeley AUTHOR(S): Wilde, Pat; Leslie, Kenneth; Leising, Joseph; Glogloski,

Marek

SOURCE: Archived at University of California, Berkeley, Water Resources Archives, 1 volume, unpaged, tables DATE: 01/01/75 ABSTRACT: This is an unedited copy of a catalogue of sediment samples of the Hydraulic Engineering Research Laboratory. It is divided into three parts: basic information, grain size data, and mineralogical data. This is a computer print-out. KEYWORDS: Coastal Processes, Geomorphology cliff sediment, geology, grain size, littoral sediment, petrology, riverbed sediment California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Oceanographic Data Off Central California, 37 Degrees to 40 Degrees North, Including the Delgada Deep Sea Fan AUTHOR(S): Wilde, Pat University of California, Berkeley, Lawrence Berkeley SOURCE: Laboratory, Berkeley, CA, 1st edition DATE: 04/01/76 ABSTRACT: Charts of various types of oceanographic data including offshore sediments, coastal sediments and coastal wave refraction survey. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Survey geology, littoral sediment, maps, nearshore currents, wave climate, wave transformation California, Subregion I, Subregion II, Subregion IV, Subregion IV Channel Sands and Petroleum Potential of Monterey Deep-Sea Fan, California AUTHOR(S): Wilde, Pat; Normark, W.; Chase, T. E. The American Association of Petroleum Geologists Bulletin, SOURCE: volume 62, No. 6, pages 967-983, 7 figures, 3 tables DATE: 06/01/78 The possibility of substantial petroleum resources in deep ABSTRACT: water adjacent to the continents in areas of hemipelagic sedimentation has been suggested by numerous authors. This study considers one such area adjacent to the United States; the continental rise off California between 33 and 40 N lat. The rise covers 200,000 sq km and consists of three major submarine fans, the Arguello, Monterey, and Delgada, with sediment thicknesses up to 3 km in water depths of 3,000 to 4,500 m. The fans are composed primarily of continental debris carried down submarine canyons and deposited on the fan through a system of branching and meandering submarine valleys and channels.

KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology deltas, geology, littoral sediment, offshore/onshore transport, petrology, submarine canyons California, Subregion I, Subregion IV, Spanish Flat Cell, Santa Cruz Cell, S. Monterey Bay Cell Oceanographic Data off Northern California and Southern Oregon; 40 to 43 degree North, including the Gorda Deep Sea Fan AUTHOR(S): Wilde, Pat SOURCE: University of California, Berkeley, Lawrence Berkeley Laboratory, Berkeley, CA, Earth Sciences Division, 1st Edition DATE: 11/01/78 ABSTRACT: Charts of various oceanographic data including bottom sediments, surface currents, coastal wave refraction. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Survey geology, littoral sediment, maps, nearshore currents, wave climate, wave transformation California, Subregion I, Mattole River Cell, S. Mattole River Reach Bathymetric Chart of the Monterey Deep Sea Fan AUTHOR(S): Wilde, Pat SOURCE: Harvard University and Scripps Institution of Oceanography, La Jolla, CA DATE: 01/01/85 ABSTRACT: Bathymetric Chart of the Monterey Deep Sea Fan. KEYWORDS: Survey hydrographic surveys, maps California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Shoreline Protection and Earthwork Grading, Pillar Point Marina, El Granada, CA AUTHOR(S): William F. Jones, Inc. SOURCE: For San Mateo County Harbor District, El Granada, CA, by William F. Jones Inc., San Mateo, CA, October, 1976 DATE: 10/25/76 ABSTRACT: Geotechnical criteria for design of shoreline protection, adjacent onshore grading and backfill, and intersection of internal breakwater and shore protection. Scope of Services included five soil borings, lab testing, and design recommen- dations. Grain - size curves of grab samples in the bay and from soil borings. KEYWORDS: Coastal Processes, Geomorphology coastal structures, grain size, shore protection California, Subregion III, Half Moon Bay Cell

Tsunami: The Big Wave

AUTHOR(S): Williams, Bruce C. SOURCE: Coronet, March 1967, PP. 98-104 DATE: 01/01/67 ABSTRACT: This is a description of the tsunami that hit Crescent City, California, on March 10, 1964. The seismic sea wave warning is discussed. KEYWORDS: Coastal Processes, Oceanography & Meteorology storm damage, tsunamis California, Subregion I, S. Smith River Reach, Klamath River Cell Coastal Zone Geology near Mendocino, California AUTHOR(S): Williams, John W.; Redrossian, Trinda L. SOURCE: California Division of Mines and Geology, Sacramento, CA, October, 1976, pages 232-237, photos, map DATE: 10/01/76 ABSTRACT: The California Division of Mines and Geology made a reconnais- sance geologic investigation of the geologic hazards and mineral resources within a 25 square mile area between Russian Gulch and Buckhorn Cove, Mendocino County. The geologic factors important in land use planning within this small portion were defined and summarized in this article. The factors include landslides, sea cliff retreat, liquefaction and settlement, earthquake shak- ing, tsunami inundation, and mineral resources. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics coastal erosion, geology, neotectonics, tsunamis, watersheds California, Subregion II, Coastal Zone Geology near Gualala, California AUTHOR(S): Williams, John W.; Bedrossian, Trinda L. SOURCE: California Geology (A publication of California Division of Mines and Geology), Sacramento, CA, Volume 30, No. 2, pp 27-34, photos, map, table DATE: 02/01/77 ABSTRACT: Geologic hazards and mineral resources between Schooner Gulch and the Gualala River, Mendocino County were investigated by the California Division of Mines and Geology. The reconnaissance study, undertaken at the request of the North Coast Region of the California Coastal Zone Conservation Commission describes geologic factors important to land-use planners within this small portion of the California coastal zone. This article summarizes the investigation. KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics coastal erosion, geology, neotectonics, shoreline use, tsunamis, watersheds California, Subregion II, S. Navarro River Reach-A, S. Navarro River Reach-B

Geologic Mapping for Coastal Zone Planning in California- Background and

Examples AUTHOR(S): Williams, John W.; Bedrossian, T. L. SOURCE: San Jose State University, Department of Geology, San Jose, CA, Environmental Geology 2(3), New York, NY, 151-163, Oceanic Abstracts (79-06876), Bethesda, MD DATE: 01/01/78 ABSTRACT: One aspect of land-use planning is effective geologic mapping for the delineation of geologic hazards. The feasibility of local government implementation of the geologic policies in the 1975 California Coastal Plan, a plan designed to facilitate and direct comprehensive coastal land-use planning, was evaluated. Operating under restrictions similar to those that would be encountered by local agencies attempting to implement the policies, geologic guidelines were applied to 2 areas in Mendocino County on the northern coast of California. Using limited data and reconnaissance mapping techniques, maps were KEYWORDS: Coastal Processes, Geomorphology, Socioeconomics coastal erosion, geology, neotectonics, shoreline use, tsunamis, watersheds California, Subregion II, S. Ten Mile River Reach, Navarro River Cell, S. Navarro River Reach-A Tsunamis and the San Francisco Bay Area AUTHOR(S): Williams, John W. SOURCE: Coastal Zone '78, Symposium on Technical, Environmental, Socioeconomic, and Regulatory Aspects of Coastal Zone Management, pages 1803-1817, American Soc. of Civil Engineers, New York, NY DATE: 03/16/78 ABSTRACT: A frequency distribution curve based on an adequate historical record can be used for the prediction of tsunami wave heights. Analysis of the historical record for the entrance to San Francisco Bay suggests that the one-hundred-year tsunami event has a wave height of 1.9 meters. This historical approach to tsunami wave height prediction in areas where an adequate data base exists is relatively unsophisticated, inexpensive, and the results are likely to be accepted by the general public. The results of this study are in general agreement with predictions made using various techniques including computer models of tsunami generating areas. KEYWORDS: Coastal Processes, Oceanography & Meteorology tsunamis California, Subregion III, Bolinas Bay Cell, San Francisco Cell

River Discharge to the Sea from the Shores of the Conterminous United States,

Alaska, and Puerto Rico AUTHOR(S): Wilson, A. SOURCE: U. S. Geological Survey, Hydrologic Investigation Atlas HA-282, scale 1:500,000, 1 sheet DATE: 01/01/67 ABSTRACT: River discharge from large coastal regions to the oceans is shown in this 1:500,000 scale map of the conterminous United States. The coastal regions are about the size of central and northern California combined. KEYWORDS: Hydrology & Hydraulics river discharge California, Subregion I, Subregion II, Subregion IV, Subregion V Feasibility Study for a Surge-Action Model of Monterey Harbor, California AUTHOR(S): Wilson, Basil W.; Hendrickson, J. A.; Kilmer, R. E. Prepared by Science Engineering Associates, San Marino, CA, for SOURCE: USACE, San Francisco District, 163 pages With Appendices DATE: 10/01/65 Wind and wave climate for Monterey Bay and vicinity including ABSTRACT: refraction, winds, storms, wave energy spectra and model feasibility. KEYWORDS: Coastal Processes coastal structures, storms/floods, wave climate, wave transformation, wind California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell The Tsunami of the Alaskan Earthquake, 1964: Engineering Evaluation AUTHOR(S): Wilson, Basil W.; Torum, Alf USACE, Coastal Engineering Research Center, Vicksburg, MS, SOURCE: Technical Memorandum No. 25 DATE: 05/01/68 Detailed studies of the main Tsunami and local seismic sea ABSTRACT: waves are given for damaged areas in Alaska, especially those in Prince William Sound. Similar studies are presented for areas in Canada, Washington, Oregon and California. A wave analysis for each place and an engineering evaluation is presented for severly damaged areas. Northern California is discussed, with tsunami damage at Crescent detailed on pages 328-346. KEYWORDS: Coastal Processes, Oceanography & Meteorology storm damage, tsunamis California, Subregion I, Subregion II, Subregion IV, S. Smith River Reach, Klamath River Cell, Wave Action and Breakwater Location, Half Moon Bay Harbor, Half Moon Bay, California: Hydraulic Model Investigation AUTHOR(S): Wilson, Howard B.

SOURCE: USACE, Engineer Waterways Experiment Station, Vicksburg, MS, Technical Report 2-668, Jan 1965, 70 pages, Water Resources Abstracts (028923 W71-07786), Minneapolis, MN DATE: 01/01/65 ABSTRACT: The entire Half Moon Bay Harbor Basin including the surrounding breakwater system and sufficient coastline and offshore hydrography were reproduced in a 1:100-scale hydraulic model equipped with wave-generating and wave-height measuring devices. The model was used to determine the optimum location and length of breakwaters necessary to provide adequate protection for pleasure craft and fishing boats berthed at the piers during storm wave action. It was concluded that an added section of rubble-mound breakwater about 1050 ft. long, which would extend the existing west breakwater in a southeasterly direction and KEYWORDS: Coastal Processes coastal structures, hydrographic surveys, institutions/planning/mgmt., storm waves, wave climate, wave transformation California, Subregion III, Half Moon Bay Cell, S. Half Moon Bay Reach-A Wave Action and Breakwater Location, Noyo Harbor, California, Hydraulic Model Investigation AUTHOR(S): Wilson, Howard B. SOURCE: USACE, Waterways Experiment Station, Vicksburg, MS, TR 2-799 DATE: 11/01/67 ABSTRACT: The Noyo Cove at the mouth of Noyo River, the Lower 0.8 miles of Noyo River, and sufficient coastline and offshore bathymetry to permit accurate simulation of storm-wave attack in the area were reproduced in a 1:100scale hydraulic model. The model was equipped with wave-generating and waveheightmeasuring devices, used to predict the efficacy of several proposed breakwater plans. It was determined that a breakwater plan consisting of a south arm originating near the south limit Noyo Cove and extending about 1900 ft in a NNW direction, plus a companion arm originating along the bluffs of the north limit of the cove and extending about 320 ft in a WSW direction, would provide the desired protection to the harbor. KEYWORDS: Coastal Processes coastal structures, hydrographic surveys, institutions/planning/mgmt., storm waves, wave climate, wave transformation California, Subregion II, S. Ten Mile River Reach

Precipitation and Runoff in the Smith River Watershed AUTHOR(S): Winston, Matthew; Goodridge, James D. SOURCE: Unpublished report, 22 pages, archived at University of California, Berkeley, Water Resources Archives DATE: 09/01/80 ABSTRACT: A report on the drainage system of the Smith River and causes behind the runoff. KEYWORDS: Geomorphology, Hydrology & Hydraulics precipitation, river discharge, stream gaging, watersheds California, Subregion I, Smith River Cell Ocean Currents Monthly Summary AUTHOR(S): Winzler and Kelly Humboldt Bay Wastewater Authority, 5 Volumes of Different Time SOURCE: Periods, prepared by Winzler and Kelly Consulting Engineers, Eureka, CA DATE: 01/01/76 ABSTRACT: Each volume contains a presentation of current data near Humbolt Bay for different periods: Volume One: January 8 - February 7, 1976 Volume Two: February 7 - June 7, 1976 Volume Three: June 7 - June 29, 1976 volume Four: June 29 - August 2, 1976 Volume Five: August 2 - September 30, 1976 KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, Subregion I, Eureka Cell Oceanographic Study AUTHOR(S): Winzler and Kelly Humboldt Bay Waste Water Authority, Volume 1, First Period, SOURCE: prepared by Winzler and Kelly Consulting Engineers, Eureka, CA DATE: 01/31/76 ABSTRACT: A biological study showing that no particular biological conditions exist which would justify the modification of an outfall route. Also shown is that there are no significant geology constraints. The study includes, benthic infaunal studies, fish and macroinvertebrate studies, geophysical and foundation studies, physical, chemical and bacteriological studies, and droque, drift card and dispersion studies. Specifically deals with a proposed ocean outfall project. Includes charts and graphs. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics coastal currents, environmental constraints, California, Subregion I, Eureka Cell Oceangraphic Survey AUTHOR(S): Winzler and Kelly SOURCE: Winzler and Kelly Consulting Engineers, Eureka, California

DATE: 03/04/76

ABSTRACT: Coastal current measurement data for the area offshore Humboldt Bay. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, Subregion I, Eureka Cell Oceanographic Study AUTHOR(S): Winzler and Kelly Humboldt Bay Waste Water Authority, Volume 2, Second Period, SOURCE: prepared by Winzler and Kelly Consulting Engineers, Eureka, CA DATE: 03/31/76 ABSTRACT: Study dealing with outfall design and environmental baseline information. This volume includes a physical, chemical, and bacteriological study, benthic infaunal study, a fish and macroinvertebrate study, and a droque, draft card, and dispers- ion study. Includes maps, graphs, and tables. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics coastal currents, environmental constraints, institutions/planning/mgmt., nearshore currents, shoreline use California, Subregion I, Eureka Cell A Study of Physical Oceanography of the Coastal Zone Near the Proposed Sewer Outfall of the Humboldt Bay Waste Water Authority Third Period Report AUTHOR(S): Winzler and Kelly Humboldt Bay Waste Water Authority, Oceangraphic Study, SOURCE: prepared by Winzler and Kelly Consulting Engineers, Eureka, CA DATE: 06/30/76 This report described the progress of coastal oceanographic ABSTRACT: studies conducted near Eureka, California. This was the third in a series of data reports. The first two reports covered the period from 20 October 1975 through 1 April 1976. This report covers the period from 1 April to 18 July 1976. These studies were undertaken to examine local currents and diffusion in the vicinity of a proposed sewer outfall. Three types of experiments were conducted. Surface currents are measured with drift cards, near-surface currents are followed with parachute drogues, and diffusion in the surface layer is KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, nearshore currents California, Subregion I, Eureka Cell Surf Zone Profiles - North Spit, Humboldt Bay AUTHOR(S): Winzler and Kelly SOURCE: Winzler and Kelly Consulting Engineers, Eureka, CA, 2 maps, Job No. 76-046 DATE: 10/13/76 ABSTRACT: Plan and profile maps of the surf zone at the North Spit of Humboldt

Bay. KEYWORDS: Survey beach profiles, hydrographic surveys, maps California, Subregion I, Eureka Cell Plan and Profile, Samoa Beach AUTHOR(S): Winzler and Kelly SOURCE: Winzler and Kelly, Consulting Engineers, Eureka, CA DATE: 05/24/77 ABSTRACT: Surfzone profile off Samoa Beach. KEYWORDS: Survey beach profiles, hydrographic surveys, maps California, Subregion I, Eureka Cell A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Volume III - Socioeconomic Conditions AUTHOR(S): Winzler and Kelly SOURCE: U.S. Bureau of Land Management, U.S. Department of the Interior, Washington, D.C., Volume III, prepared by Winzler and Kelly Consulting Engineers, Eureka, CA DATE: 08/01/77 ABSTRACT: Mineral exploration and development on the Outer Continental shelf (OCS) and its environmental impact. The study identifies data gaps and recommends areas where future research is needed. Topics include demography and socioeconomic considerations; pollution sources; historical and archaeological resources; recreational site vulnerability; and socio-economic index. KEYWORDS: Socioeconomics environmental constraints, growth potential/recreation, population, shoreline use, California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas. Biological Conditions, Volume II AUTHOR(S): Winzler and Kelly SOURCE: Bureau of Land Management, U.S. Department of the Interior, Washington, D.C., Volume II, prepared by Winzler and Kelly Consulting Engineers, Eureka, CA DATE: 08/01/77 ABSTRACT: Discusses mineral exploration and development on the Outer Continental Shelf (OCS), with a focus on biological resources. The study identifies data gaps and recommends areas where future research is needed. Topics include benthnic fauna and flora; phytoplankton; zooplankton; marine mammals; fisheries; and marine and shore birds. KEYWORDS: Socioeconomics environmental constraints, shoreline use California, Subregion I, Subregion II,

A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Volume IV, Master Bibliography, Book 1 AUTHOR(S): Winzler and Kelly SOURCE: Prepared for Burea of Land Management, Washington, D.C., Volume IV, Winzler and Kelly Consulting Engineers, Eureka, California DATE: 08/01/77 ABSTRACT: The master bibliography contains all references cited in the individual subject chapters (Volumes I-III) as well as other uncited references relevant to the summary of coastal zone and offshore area knowledge -Included over 12,000 citation. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics, Survey coastal currents, geology, growth potential/recreation, shoreline changes, shoreline use, wave climate California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Volume I, Physical Conditions, Book 1 AUTHOR(S): Winzler and Kelly SOURCE: Prepared for Bureau of Land Management, Washington D.C. Report No. BLM/ST-78/17, Winzler and Kelly Consulting Engineers, Eureka, California DATE: 08/01/77 ABSTRACT: The report presents a literature survey and interpretation of existing knowledge in physical sciences of the coastal counties from Ventura to the Oregon Border. Each chapter contains information on the existing environment, informational and data gaps, on-going research, recommendations for further research, and a list of references. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology climatology, coastal currents, geology, California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Volume I, Physical Conditions, Book 2 AUTHOR(S): Winzler and Kelly SOURCE: Prepared for Bureau of Land Management, Washington, D.C., Report No. BLM/ST-78/18, Winzler and Kelly Consulting Engineers, Eureka, California DATE: 08/01/77 ABSTRACT: Report includes information on oceanography; water pollution; offshore drilling; and coastal zone processes. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology climatology, coastal currents, geology, shoreline changes, wave climate, wind

California, Subregion I, Subregion II, Subregion IV, Subregion V Oceanographic Study AUTHOR(S): Winzler and Kelly SOURCE: Humboldt Bay Wastewater Authority, Volume 4, Fourth Period, prepared by Winzler and Kelly Consulting Engineers, Eureka, CA DATE: 01/01/85 ABSTRACT: Study to provide data on an outfall design and to generate environmental baseline information. This volume includes physical, chemical, and bacteriological studies; benthic infaunal studies; fish and macroinvertebrate studies; and drogue, drift card and dispersion studies. Includes graphs, charts, and tables. KEYWORDS: Coastal Processes, Geomorphology, Oceanography & Meteorology, Socioeconomics coastal currents, environmental constraints, institutions/planning/mgmt., nearshore currents, shoreline use California, Subregion I, Eureka Cell Coastal Currents and Mass Transport of Surface Sediments Over the Shelf Regions of Monterey Bay, California AUTHOR(S): Wolf, Stephen C. SOURCE: U.S. Geological Survey, Menlo Park, CA, Office of Marine Geology and Hydrology; Marine Geology, Volume 8, No. 5, p 321-336, Water Resources Abstracts (017101 W70-07666) DATE: 05/01/70 In Monterey Bay, California, the highest concentrations of ABSTRACT: medium and fine sands occur nearshore between 10 and 30 fathoms. Silt and clay accumulate in greater depths. Contours of median diameter roughly parallel the Isobaths. Fine-grained materials are supplied to the Bay Region from erosion of cliffs, from sediment laden river discharge, and from continual reworking of widespread sea floor sediments. These sediments in turn are picked up by coastal currents and distributed over the shelf regions by present day current regimes. Studies of bottom currents over the shelf regions and in Monterey Canyon have KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents, grain size, littoral sediment, nearshore currents, river-bed sediment, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Gazette of Surface Waters of California, Part 3, Pacific Coast and Great Basin streams AUTHOR(S): Wood, B. D. SOURCE: U. S. Geological Survey, Water-Supply Paper 297, 244 pages

DATE: 01/01/13 ABSTRACT: Even though written in 1913, this report contains useful information on surface water in California. Information about lakes and streams, for the most part based on topographic maps, is listed in alphabetical order. For streams, the source, a description of its course, length, principal tributaries, drainage area, and destination are given. For lakes, the inlets outlets, elevation, and a short description of the lake is given A complete list of the gaging stations maintained on streams in the Great Basin and the streams tributary to the Pacific Ocean from 1888 to July 1, 1912 is also presented. KEYWORDS: Hydrology & Hydraulics maps, river discharge California, Subregion I, Subregion II, Subregion IV, Subregion V Stream Gradients and the Monterey Sea Valley, Calif AUTHOR(S): Woodford, A. O. Geological Society of America Bulletin, Boulder, CO, Volume 62, SOURCE: pages 799-852 DATE: 01/01/51 ABSTRACT: Not reviewed. KEYWORDS: Geomorphology, Hydrology & Hydraulics geomorphic processes, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Wave Refraction Study, Southwest Ocean Outfall Project AUTHOR(S): Woodward Clyde Consultants SOURCE: Woodward-Clyde Consultants, Inc., San Francisco, CA DATE: 01/01/78 ABSTRACT: Discusses wave refraction and the serious beach erosion problem at Ocean Beach, San Francisco, California. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal erosion, storms/floods, wave climate, wave transformation, wind, wind transport California, Subregion III, San Francisco Cell Coastal Engineering Evaluation, Subtask 3-2, Southwest Ocean Outfall Project, City and County of San Francisco AUTHOR(S): Woodward Clyde Consultants SOURCE: PBQ & D, Inc., San Francisco, CA, 2 volumes, tables, folding maps, folding graphs, V. 2 is addendum DATE: 01/02/78 ABSTRACT: This report presented a coastal engineering evaluation for a then proposed southwest ocean outfall. The objective of the master plan was to

provide for the collection and disposal of both sanitary and storm water flows by disposing of them in the Pacific Ocean. This study was conducted to determine the influence of the Pacific Ocean on the proposed facilities. This report includes evaluations of the effects of tides, storm waves day-todav wave conditions, tsunamis, and bottom sediment transport. KEYWORDS: Coastal Processes, Survey littoral sediment, storm waves, tides, tsunamis, California, Subregion III, Bolinas Bay Cell, San Francisco Cell Feasibility Study for Groin Reconstruction and Bulkhead Replacement at Bolinas Beach, Bolinas, Marin County, California AUTHOR(S): Woodward Clyde Consultants Woodword-Clyde Consultants Inc., San Francisco, CA, SOURCE: (unpublished), for Bolinas Lagoon Technical Advisory Committee DATE: 07/01/82 ABSTRACT: Feasibility of replacing groin and bulkheads at Bolinas Lagoon channel. Detailed discussion of littoral bulkhead, with attached minutes of Bolinas Lagoon technical advisory committee meeting of 10/18/82. KEYWORDS: Coastal Processes, Oceanography & Meteorology bench marks, cliff sediment, coastal currents, coastal structures, longshore transport, sand entrapment California, Subregion III, S. Drakes Bay Reach, Bolinas Bay Cell Map Showing Locations of Samples Dated by Radiocarbon Methods in the San Francisco Bay Region AUTHOR(S): Wright, R. H. SOURCE: U. S. Geological Survey, Miscellaneous Field Studies, Map MF-317 DATE: 01/01/71 ABSTRACT: 46 sites, encompassing a total of 76 C14 dates, are plotted on a 1:500,000 scale map of the San Francisco Bay region. Infor- mation about the sites, location, the C14 dates, and the source of data are also given in text section. Data from locations in the vicinity of the coast include: (1) The Bodega Bay area, and (2) coastal terraces in San Mateo and Santa Cruz Counties. KEYWORDS: Geomorphology neotectonics, sea level change California, Subregion II, Subregion III, Subregion IV, Bodega Bay Cell, S. Half Moon Bay Reach-A, S. Half Moon Bay Reach-B, Santa Cruz Cell Surface Temperature and Salinity Observations at Pacific North- west Shore Stations for 1965 and 1966 AUTHOR(S): Wyatt, Bruce; Gilbert, William

SOURCE: Oregon State University at Corvallis, OR, School of Science, Department of Oceanography, Data Report No. 25, 28 pages and references (Ref. No. 67-8) DATE: 09/01/67 ABSTRACT: A collection of hydrographic data from sites off the Coast of Oregon and Northern California, including temperature distribut- ion, salinity, and offshore conditions. KEYWORDS: Oceanography & Meteorology climatology California, Oregon, Subregion I, S. Smith River Reach, Klamath River Cell Geostrophic Flow of the California Current at the Surface and at 200 Meters AUTHOR(S): Wyllie, John G. University of California, San Diego, Scripps Institute of SOURCE: Oceanography, La Jolla, CA DATE: 01/01/65 ABSTRACT: In this atlas attention is directed to the geostrophic flow at the surface and at 200 meters, relative to currents at 500 meters, as computed from temperature-salinity-depth data. More than 280 charts were prepared covering the period from early 1949 through the spring of 1965. These charts bring together most of the data available on the geostrophic flow of the California Current. KEYWORDS: Coastal Processes, Oceanography & Meteorology coastal currents California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V The Dynamic Topography of the Pacific Ocean and Its Fluctuations AUTHOR(S): Wyrtki, Klaus SOURCE: Hawaii, Institute of Geophysics, HIG-74-5 DATE: 08/01/74 This analysis provides information on the changes of the mean ABSTRACT: geostrophic circulation pattern throughout the year and its variability. Also investigated is the possibility of using temperature profiles from expendable bathythermographs in connection with average temperature-salinity curves to determine the dynamic topography for quasi-synoptic situations. Maps and graphs are included. KEYWORDS: Oceanography & Meteorology coastal currents, maps California, Subregion I, Subregion II, Subregion III, Subregion IV, Subregion V Recent Sediments of Monterey Bay California AUTHOR(S): Yancey, T. E.

SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Technical Report No. 11, 5 pages (in 2 boxes), tables, diagrams, (HEL-2-18) DATE: 07/01/68 ABSTRACT: Sediments of Monterey Bay are divisible into five mineral provinces. Two of the provinces are from the Salinas and Pajaro Rivers, the other three are not traceable to any known source. Sediments of the Salinas River have high garnet content, and the minerals glaucophane and lawsonite distinguish the Pajaro River sediments. A mineral province is restricted to beach sands along the north shore of the bay, and is carried into the bay by longshore drift from the northwest. The heavy mineral provinces do not coincide with the age differences of the sediment cover. The San Lorenzo River does not produce а detectable mineral province. KEYWORDS: Coastal Processes, Geomorphology grain size, littoral sediment, longshore transport, petrology, river sediment discharge, submarine canyons California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Recent Sediments of the Central California Continental Shelf Pillar Point to Pigeon Point, Part A. Introduction and Grain Size Data AUTHOR(S): Yancey, T. E.; Isselhardt, C.; Osuch, L.; Lee, J. and Wilde, Pat University of California, Berkeley, Hydraulic Engineering SOURCE: Laboratory, Report No. HEL-2-26, 66 Pages DATE: 07/01/70 ABSTRACT: This work was part of a continuing study of the sediments and sedimentary processes of the continental shelf off Central California. Sediment analyses of the samples were done at the University of California, Berkeley, utilizing the facilities of the Departments of Civil Engineering, and Geology, and the Institute of Marine Resources. KEYWORDS: Coastal Processes, Geomorphology geology, grain size, littoral sediment, petrology California, Subregion III, Half Moon Bay Cell, Faunal Communities on the Central California Shelf Near San Francisco -А Sedimental Environmental Study AUTHOR(S): Yancey, T. E.; Wilde, Pat SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, Technical Report (HEL-2-29) DATE: 12/01/70 ABSTRACT: Correlation of identity and numbers of organic hard parts with

bottom sedimentary environments from 50 sediment samples from the San Francisco offshore bar and adjacent areas in the Gulf of the Farallones off the Central California continental shelf per- mit the subdivision of this region into the faunal communities. (1) The hard substrate community, in areas of rocky bottoms shows the greatest faunal diversity, particularly in mollusks, and the highest percentage of organic hard parts. (2) The shelf community, in fine grained sediments found in water depths greater than 40 feet, is the most widespread characterized by relatively low productivity. (3) The bar community on rela-KEYWORDS: Coastal Processes, Geomorphology environmental constraints, geology, grain size, littoral sediment, sand bars, sedimentation California, Subregion III, Bolinas Bay Cell, San Francisco Cell Recent Sediments of Monterey Bay AUTHOR(S): Yancey, T. E.; Wilde, Pat University of California, Berkeley, Hydraulic Engineering SOURCE: Laboratory, 59 pages, Technical Report HEL-2-33 DATE: 09/01/71 ABSTRACT: The heavy mineralogy of the sand fraction for beach samples reported by Sayles (1966) and 10 new offshore samples from South Monterey Bay was determined optically. For each sample, the percentage of the more diagnostic transparent minerals was plotted graphically in order of persistence: zircon, garnet, biotite, apatite, clinozoisite and epidote, lawsonite, green hornblend, oxy-hornblende, glaucophane, sphene, zoisite, augite, jadeite, hypersthene, enstatite, and tremolite & actinolite. Additional data on accessory transparent minerals, composite grains (rock fragments) and opaque minerals are listed with each graph. A bibliography is included which presents work on the geology and sediment of Monterey Bay. KEYWORDS: Coastal Processes, Geomorphology geology, grain size, littoral sediment, petrology California, Subregion IV, Santa Cruz Cell, S. Monterey Bay Cell Hell from High Water AUTHOR(S): Yarbrough, James J. SOURCE: The Del Norte Triplicate, Crescent City, CA DATE: 01/01/65 ABSTRACT: A pictorial report of flooding of Del Norte County by the Klamath and Smith Rivers.

KEYWORDS: Hydrology & Hydraulics, Socioeconomics aerial photography, storm damage, storms/floods California, Subregion I, Smith River Cell, S. Smith River Reach, Klamath River Cell, S. Klamath River Reach Plan Geometry of Headland-Bay Beaches AUTHOR(S): Yasso, Warren E. Columbia University, New York, NY, Dept of Geology; U.S. Dept SOURCE: of the Navy, Office of Naval Research, Geography Branch, Technical Report No.7 of Project NR 388-057, Contract No. 266(68), 30 p. DATE: 01/01/64 ABSTRACT: A headland-bay beach is defined as a beach lying in the lee of headland subjected to a predominant direction of wave attack. Such beaches characteristically have a seaward-concave plan shape resulting from erosion caused by refraction, diffraction, and reflection of waves into the shadow zone behind the head- land. Four natural beaches were selected for testing "qoodness of fit" to the log-spiral approximation: Spiral Beach, Sandy Hook, New Jersey; Halfmoon Bay Beach, California; Drakes Beach and Limantour Spit Beach lying along the Drakes Bay shoreline to the north of San Francisco, California. Published maps were used as a source of data on shoreline shape except for KEYWORDS: Coastal Processes, Geomorphology coastal erosion, longshore transport, shoreline changes, wave transformation California, Subregion III, S. Point Reyes Reach, Drakes Bay Cell, Half Moon Bay Cell Floods of January - February 1963, in California and Nevada AUTHOR(S): Young, L. E.; Harris, E. E. U.S. Geological Survey, Water - Supply Paper 1830 - H, U.S. SOURCE: Government Printing Office, Washington, D.C., pages 472 DATE: 01/01/66 ABSTRACT: Report presents a general description of the January -February 1963 floods, a discussion of damage incurred, and a summary of peak stages and discharges at 623 sites. KEYWORDS: Hydrology & Hydraulics river discharge, storm damage, storms/floods California, Subregion II, Subregion III, Subregion IV, Subregion V Magnitude and Frequency of Floods in the United States, Part 11, Pacific Slope Basins in CA, Vol. 1, Coastal Basins South of the Klamath River Basin AUTHOR(S): Young, L. E.; Cruff, R. W. SOURCE: U. S. Geological Survey, Water-Supply Paper 1685, 272 pages

DATE: 01/01/67 ABSTRACT: This report presents a method for determining the probable magnitude of floods with recurrence intervals between 1.2 and 50 years for any stream, gaged or ungaged, in the study area. The area includes streams in California that drain into the ocean south of the Klamath River Basin. The area was divided into two regions of differing flood-frequency characteristics. A multiple-regression analysis found that the hyrodlogic basin characteristics having the most significant effect on the flood magnitude were drainage area. mean annual precipitation, and altitude. Coefficients for the multiple-regression equation are given for the two regions. KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging, storms/floods, watersheds California, Subregion I, Subregion II, Subregion IV, Subregion V Magnitude and Frequency of Floods in the United States, Part 11, Pacific Slope Basins in Calif., Vol. 2, Klamath and Smith River Basins and Cen. Valley AUTHOR(S): Young, L. E.; Cruff, R. W. SOURCE: U. S. Geological Survey, Water-Supply Paper 1686, 308 pages DATE: 01/01/67 ABSTRACT: This report presents a method for determining the probable magnitude of floods of any recurrence interval between 1.2 and 50 years for any stream. gaged or ungaged, in the study area. The study area includes the Klamath and Smith River basins plus the small streams between them that drain into the Pacific Ocean. A multiple-regression analysis found that the hydrologic basin characteristics having the most significant effect on the flood magnitude were drainage area, mean annual precipitation, and altitude. California coastal streams in and north of the Klamath basin use the same coefficients in the regression equation. A table compiling all the available KEYWORDS: Hydrology & Hydraulics, Oceanography & Meteorology precipitation, river discharge, stream gaging, storms/floods, watersheds California, Subregion I, Smith River Cell, Klamath River Cell The Last Frontier AUTHOR(S): Z'berg, Edwin L.; Shoemaker, Winfield A. SOURCE: California Assembly Committee on Natural Resources, Planning, and Public Works, Sacramento, CA, Part IV, 24 pages, Volume 25, Report 9 DATE: 01/01/65 ABSTRACT: An assessment of the policies and programs of marine and coastal environment in California, which had the basic goal of formulating a meaningful

approach toward the development and adoption of comprehensive state policy in this field. The Subcommittee on Marine Resources, performing this study, pursued these general objectives: identification of the most promising areas of economic activity with respect to marine resources, review of proposals for the initiation of programs, problems of debris on the ocean floor, and review of the tide and submerged lands study. KEYWORDS: Coastal Processes, Socioeconomics environmental constraints, institutions/planning/mgmt., property value/land use California, Subregion I, Subregion II, Subregion IV, Subregion V A General Reconnaissance of Coastal Dunes of California AUTHOR(S): Zeller, R. P. SOURCE: University of California, Berkeley, Hydraulic Engineering Laboratory, 37 pages, appendices, Series 72, issue 6 DATE: 08/01/61 ABSTRACT: California's coastal dune masses were studied and described from aerial photographs, geologic maps and geologic reports of various areas. Distances were measured directly from maps and aerial photos. Orientations of beaches and sand dunes were determined from photos. The orientations are average and the distances approximate. The descriptions of the larger sand masses are very general in scope. KEYWORDS: Coastal Processes, Geomorphology aerial photography, dunes, geology, shoreline changes, wave climate, wind transport California, Subregion I, Subregion II, Subregion IV, Subregion V A General Reconnaissance of Coastal Dunes of California AUTHOR(S): Zeller, R. P. SOURCE: USACE, Beach Erosion Board (now Coastal Engineering Research Center, Vicksburg, MS), Miscellaneous Paper 1-62, 38 pages, maps DATE: 06/01/62 ABSTRACT: The formation and existence of coastal sand dunes are important considerations in the analysis of coastal problems, and in the planning and design of remedial measures. Dune forms, beach configuration and conditions, activity of dune sand, and sediment sources are the factors considered in this study. KEYWORDS: Coastal Processes, Geomorphology aerial photography, dunes, geology, shoreline changes, wave climate, wind transport California, Subregion I, Subregion II, Subregion IV, Subregion V