

TABLE2TASK3CSMW.xls

TABLE 2 - Beach Nourishment Projects in California (modified from Coyne, 2000)											
Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Whaler Island	Smith River	Crescent City, Del Norte Co.			FC	1998	70,000	Crescent City Harbor (inner Harbor Basin, entrance channels)	hopper dredge, hydraulic pipeline dredge or clamshell/barge.	sandy/silty	DR, R
Crescent City	Klamath River	Crescent City, Del Norte Co.			TC'89	every few years	3-4,000,000		harbor bypassing		B
Crescent City	Klamath River	Crescent City, Del Norte Co.			TC'91	every few years	~3,500,000				harbor bypassing
Humboldt Bay South Spit (Nearshore Ocean Disposal Site)	Eureka	Humboldt Bay, Humboldt Co.			FC	August to October, 1988	745,000	Humboldt Harbor Bar, Entrance, and North Bay Channels	maintenance and advance maintenance dredging using hopper dredge	expected to be >90% sand	N,DS, DR
Humboldt Bay (Nearshore Ocean Disposal Site)	Eureka	Humboldt Bay, Humboldt Co.			FC	August 1 - October 15, 1989	585,000	Humboldt Harbor Bar, Entrance, North Bay Channel	self-propelled hopper dredge		DS,DR
Doran Beach	Bodega Bay	Bodega Bay, Sonoma County			FC	1980	<80,000	Federal Channel, Bodega Harbor, Bodega Bay	placed above MHHW	mostly sand	DS,DR
Bolinas Bay	Bolinas Bay	Bolinas Bay			TC'91		-65,000				beach erosion control
Ocean Beach	San Francisco	San Francisco, San Francisco			TC'91			San Francisco sewage disposal "box"			upland excavation spoils
Capitola	Santa Cruz	Capitola, Santa Cruz Co.			TC'91	1970	~20,000				beach restoration
Capitola	Santa Cruz	Capitola, Santa Cruz Co.			TC'89	1969-70	2000 truckloads	local quarry sand	terminal groin with small beach fill delivered by truck		N
Capitola	Santa Cruz	Capitola, Santa Cruz Co.			SPCA'76	1970					groin and fill
Seabright Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			TC'89	periodically		Santa Cruz small craft harbor entrance	harbor dredging and beach placement		DR, N
Seabright Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			TC'91						harbor bypassing
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1965	70,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1966	34,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1967	57,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1968	60,500	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1969	79,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1970	94,700	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1971	108,300	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1972	90,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1973	109,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1974	60,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1975	91,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1976	98,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1977	52,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1977	147,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1978	55,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1979	162,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1980	190,250	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1981	187,687	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1982	138,188	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1983	154,498	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1984	79,479	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1985	145,237	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1986	207,315	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1987	212,410	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1988	230,351	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1989	214,544	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1990	173,567	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1991	163,250	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			RW'94	1992	160,000	Santa Cruz Harbor			
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			TC'89			Santa Cruz small craft harbor entrance	harbor dredging and beach placement		DR, N
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			TC'91						harbor bypassing
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			FC	October 81; October 82; October 83; October 84; October 85; October 86	230,000	Santa Cruz Yacht Harbor channel	maintenance dredging; transport by suction dredge and pipeline into surf zone		DR, R
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			FC	March/April/ May 1984	130,000	Santa Cruz Yacht Harbor	maintenance dredging of Santa Cruz Yacht Harbor	<16" diameter dredge pipeline, in water, discharging onto beach, followed by beach shaping	R, DS, DR
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			FC	12/15/84-2/10/85; 2/11/85-3/28/85; 4/15/85-5/17/85	176,000	Santa Cruz Yacht Harbor		<16" pipeline from E jetty of yacht harbor, then buried in beach w/ shifting discharge points either on beach or in surf zone	R, DS, DR
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			FC	11/22/85-12/22/85 1/6/86 - 2/6/86; 2/10/86 - 3/21/86; 4/7/86 - 5/7/86	230,000	Santa Cruz Yacht Harbor	maintenance dredging	<16" diameter dredge pipeline, from E jetty, buried, discharging onto beach at multiple points	DS, DR
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			ACOE'90	1986	197,000	Santa Cruz Harbor			beach fill
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			ACOE'90	1987	212,000	Santa Cruz Harbor			beach fill

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Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			ACOE'90	1988	210,000	Santa Cruz Harbor	beach fill		DR, DS
Twin Lakes State Beach	Santa Cruz	Santa Cruz, Santa Cruz Co.			FC	1994	<75,000	San Lorenzo River channels			N, DS, DR
Moss Landing State Beach	Southern Monterey Bay	Monterey Bay, Monterey County			FC	March/April '84	10-20,000	maintenance dredging of Moss Landing Harbor	hydraulic cutterhead dredge with submerged pipeline disposal intertidally (north of Sandholt Pier)	medium sand	R, DS, DR
Moss Landing State Beach	Southern Monterey Bay	Monterey Bay, Monterey County			ACOE'90	1987	29,000	Moss Landing Harbor	beach fill		DR, DS
Morro Bay beaches	Morro Bay	Morro Bay, San Luis Obispo			TC'89	since 1940s	120,000/yr	Morro Bay navigational channel			DR, N
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'91	1949	822,000				
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'91	1964	702,000				
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'91	1968	406,000				
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'91	1971	190,000				
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'91	1982					
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'91	1985					
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'89	1985	120,000	Morro Bay navigational channel	dredged, then pumped N of harbor entrance		DR, N
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'91	1987					
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			ACOE'90	1987	400,000	probably Morro Bay	beach fill		DR, DS
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'91	1941-1943	1,000,000		0.7 mi long fill		
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'91	1942-1946	3,071,000				Harbor construction
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'91	1974?					
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'89	early 1940's		Morro Bay navigational channel			DR
Morro Bay	Morro Bay	Morro Bay, San Luis Obispo			TC'91	yearly	~120,000				harbor bypassing
Morro Dunes Natural Preserve	Morro Bay	Morro Bay, San Luis Obispo			FC	November '84 to February '85	50,000	Morro Bay entrance channel, Navy Channel, Morro Channel	hydraulic suction dredge, tractor with pipe lift attachment on beach	fine to medium grained, poorly sorted sands, 1-8% fines	R, DS, DR
Morro Dunes Natural Preserve	Morro Bay	Morro Bay, San Luis Obispo			FC	October 1, 1986 - February 15, 1987	350,000	Morro Bay Harbor	pipeline along sand spit to beach disposal site 3 miles S of harbor entrance	predominantly sand	R, DS, DR
Morro Dunes Natural Preserve	Morro Bay	Morro Bay, San Luis Obispo			FC	September '90 to 10/15/90-11/30/90	200,000	Morro Bay Entrance, Navy, Morro Channels and additional embayment near entrance	maintenance dredging by hopper dredge; deposition in no deeper than 40' MLLW (sand spit 8000' S of harbor) (nearshore disposal)	>97% sand	DS, DR
Morro Dunes Natural Preserve	Morro Bay	Morro Bay, San Luis Obispo			FC	August to December 1993	all or fraction of 840,000	Morro Bay Harbor mouth	hopper dredge; disposal by hopper dredge to nearshore no deeper than -40' MLLW (sand spit; 8000' S of harbor)		N, DS
Morro Strand State Beach (South)	Morro Bay	Morro Bay, San Luis Obispo			FC	November '84 to February '85	450,000	Morro Bay entrance channel, Navy Channel, Morro Channel	hydraulic suction dredge, 12-26" diameter pipeline on surface of beach (3.6 mi long)	fine to medium grained, poorly sorted sands, 1-8% fines	R, DS, DR
Morro Strand State Beach (South)	Morro Bay	Morro Bay, San Luis Obispo			FC	September '90 to 10/15/90-11/30/90	200,000	Morro Bay Entrance, Navy, Morro Channels and additional embayment near entrance	maintenance dredging by hopper dredge; deposition in no deeper than 40' MLLW (8000' N of harbor) (nearshore disposal)	>97% sand	DS, DR
Morro Strand State Beach (South)	Morro Bay	Morro Bay, San Luis Obispo			FC	August to December 1993	all or fraction of 840,000	Morro Bay Harbor mouth	hopper dredge; disposal by either hopper dredge or pipeline from hopper dredge to surf zone or nearshore no deeper than -40' MLLW; (8000' N of harbor)		N, DS
Morro Strand State Beach (South)	Morro Bay	Morro Bay, San Luis Obispo			FC	11/1/93 - 3/31/94	600,000	Morro Bay Harbor Entrance, Navy and Morro Channels	either cutterhead hydraulic pipeline dredge with surf zone disposal or hopper/clamshell combination dredge with nearshore disposal		DS, DR
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'89	1935	202,000	Santa Barbara Harbor	first sand-bypassing operation; created offshore ridge: 200' wide, 2000' long, 18' of water, 1000' offshore (nearshore)		B
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1935	202,000		0.4 mi long; deposited in ~20 ft water depth, ~1000 ft offshore		harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1938	584,000		0.2 mi long; ~500 ft wide		harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1940	697,700		0.5 mi long		harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1942	600,110		1.0 mi long		harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1945	717,773		1.0 mi long		harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1947	642,977		1.0 mi long		harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1949	638,152		1.0 mi long		harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1950-1952	2,476,098				harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1954-1972 (periodically)					harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1972	229,333				harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			Shaw'80	1972	224804	Santa Barbara Harbor	bypassing to downcoast of harbor		
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			Shaw'80	1974	380337	Santa Barbara Harbor	bypassing to downcoast of harbor		
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1974	388,000				harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1975	50,667				harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			Shaw'80	1975	49666	Santa Barbara Harbor	bypassing to downcoast of harbor		
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			Shaw'80	1976	394714	Santa Barbara Harbor	bypassing to downcoast of harbor		
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1976	402,667				harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			Shaw'80	1977	335899	Santa Barbara Harbor	bypassing to downcoast of harbor		
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'91	1977	342,667				harbor bypassing
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			ACOE'90	1986	300,000	Santa Barbara Harbor	beach fill		
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			ACOE'90	1987	225,000	Santa Barbara Harbor	beach fill		
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			ACOE'90	1988	260,000	Santa Barbara Harbor	beach fill		

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Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also	
USACOE		via navigation Project				CD-020-94			
USACOE			loss of benthic communities; loss of beach communities		80,000 - 90,000 yd ³ disposed of at end of pier in disposal site SF-12 in 20 ft below MLLW	CD-038-83		CD-11-81	
USACOE		lowest cost disp.alt.			source: Converse 1982 source: Hall 1952; USACOE-LA 1974(Morro Bay) source: Hall 1952; USACOE-LA 1974(Morro Bay) source: Hall 1952; USACOE-LA 1974(Morro Bay) source: Hall 1952; USACOE-LA 1974(Morro Bay) source: Hall 1952; USACOE-LA 1974(Morro Bay) source: Hall 1952; USACOE-LA 1974(Morro Bay) source: Sears 1987				
	lost w/in 2 years								
	2 years				source: David Sears, Morro Beach State Park, CA dept of P & R, 1987				
USACOE		lowest cost disp.alt.							
		\$155,000			source: Hall 1952; USACOE-LA 1974(Morro Bay) source: Hall 1952; USACOE-LA 1974(Morro Bay) source: Hall 1952; USACOE-LA 1974(Morro Bay) source: Hall 1952; USACOE-LA 1974(Morro Bay) source: Hall 1952; USACOE-LA 1974				
	sand lost to offshore off "reef"		little storm recovery observed		source: Converse 1982; Armstrong 1987; Sears 1987				
USACOE					location is site of dune blowouts; replenishment is paired with revegetation effort	CD-058-84	CDP 4-84-380	CD-39-86, CDP 4-86-218	
USACOE			potential impacts on: eelgrass beds, grunion, peregrine falcon, CA brown pelican, southern sea otter, Morro Bay kangaroo rat; project timed to avoid impacts, but dredging will impact clam feeding ground of otters in channel	Corps will monitor to define impacts to endangered sea otters		CD-039-86	CDP 4-84-380; CDP 4-86-218	CD-58-84; CD-11-87	
USACOE			impacts to: eel grass beds in bay, grunions, peregrine falcons, brown pelicans, southern sea otters	COE will monitor material using pre- and post- bathymetric surveys to determine fate of material	previous monitoring of effects of dredging on clams (otter food supply) revealed no detrimental effect.	CD-029-90		CD-39-86; CD-58-84; CD-11-87	
USACOE		\$2,192,000 start-up; 80% Corps/20% City of Morro Bay	reefs in disposal area		more likely disposal choice; "Final disposal site will be selected prior to construction and based upon specific need for beach nourishment material, weather conditions, and other temporally variable factors."	CD-081-91		CD-9-90; CD-9-86; CD-8-84; ND-1-87	
USACOE			adverse impacts to Southern Sea Otter (dredging); area around Morro Creek left clear for steelhead; no dune disturbance		site is from 400' N of rock to 400' N of Morro Creek, from 5-20' below MLLW to 12' above MLLW; lead to rapid shoaling of harbor to S (CD-39-84)	CD-058-84	CDP 4-84-380	CD-39-86, CDP 4-86-218	
USACOE			impacts to: eel grass beds in bay, grunions, peregrine falcons, brown pelicans, southern sea otters	COE will monitor material using pre- and post- bathymetric surveys to determine fate of material	previous monitoring of effects of dredging on clams (otter food supply) revealed no detrimental effect.	CD-029-90		CD-39-86; CD-58-84; CD-11-87	
USACOE		\$2,192,000 start-up; 80% Corps/20% City of Morro Bay	reefs in disposal area		less likely disposal choice; "Final disposal site will be selected prior to construction and based upon specific need for beach nourishment material, weather conditions, and other temporally variable factors."	CD-081-91		CD-9-90; CD-9-86; CD-8-84; ND-1-87	
USACOE			effects on clams -> otters			CD-044-93			
	still there		"The expectation was that this sand would be carried shoreward and downcoast by natural wave activity. Unfortunately, however, the ridge remained in place, slightly reduced in height, but essentially unaltered (USACOE 1986)."		source: Hall 1952; USACOE-LA 1986; Griggs and Savoy 1986				
	bar still visible in '86 offshore; no migration onshore	\$26,260			source: Griggs and Savoy 1986; Hall 1952				
	sand out of disposal area by 1940	\$122,787			source: O'Brien 1938; USACOE-CERC 1984; O'Brien 1940; USCOE-LA 1986 (oral history) source: USACOE-LA 1986 (oral) source: Hall 1952 source: Hall 1953 source: Hall 1954 source: Hall 1955 source: Shaw 1980; USACOE-CERC 1984				
		\$131,424							
		\$170,112							
		\$109,306							
		\$122,525							
					source: Shaw 1980				
					source: Shaw 1980				
					source: Shaw 1980				
					source: Shaw 1980				
	erosion checked but beach not recovered				source: Shaw 1980; USACOE-LA 1986 (oral)				
		Section 111, RHA 1968							
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Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			FC	2/24/86 - 5/15/86	250,000	Santa Barbara Harbor	discharge point = 2300' E of Steam's Wharf within surf zone		DS, DR
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			FC	9/15/86 - 3/1/88	~100,000/yr	Santa Barbara Harbor	placement b/w sand dikes to enhance settling of sand		DS, DR
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			FC	Fall '89 to Spring '92	600,000	Santa Barbara Harbor mouth	(2300' S of Steam's Wharf)		DS, DR
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			FC	Oct '92 - Feb '93 or March 1 - April 30 '93	600,000	Santa Barbara Harbor, including West Beach	maintenance and advance maintenance dredging; disposal either on beach or single-point discharge in surf zone	dredge spoils compatible w/ local sediment on East Beach	DS, DR
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			FC	10/1/94 - 4/30/95; 10/1/95 - 4/30/96; 10/1/96 - 4/20/97	600,000	Santa Barbara Harbor and sand traps	maintenance dredging; disposal either on beach or in surf zone via pipeline oriented perpendicular to shore below MHW		DS, DR
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			FC	Fall '99 to Spring '05	600,000	Santa Barbara Harbor mouth	beach and surfzone disposal		DS, DR
East Beach	Santa Barbara	Santa Barbara, Santa Barbara			TC'89	every 1-2 years since 1935		Santa Barbara Harbor	bypassing directly onto beaches		B, N
San Buenaventura State Beach	Santa Barbara	Ventura, Ventura County			TC'89	1962	200,000		placed as part of groin project		R
San Buenaventura State Beach	Santa Barbara	Ventura, Ventura County			TC'91	1962	197,500		~1.4 mi long; 139-261 ft wide		beach erosion control (groin)
San Buenaventura Beach	Santa Barbara	Ventura, Ventura County			Shaw'80	1962	196050	Ventura Harbor	initially formed beach area 42-79 m. by 1121 m long; deposited South of groins 5,4, and 2	migrated south	
San Buenaventura Beach	Santa Barbara	Ventura, Ventura County			Shaw'80	1963	522800	Ventura Harbor	deposited north of groins 4 and 7		
San Buenaventura State Beach	Santa Barbara	Ventura, Ventura County			TC'91	1963	533,333				
San Buenaventura State Beach	Santa Barbara	Ventura, Ventura County			TC'91	1965	235,000		0.5 mi long; 150-170 ft wide		beach erosion control (groin)
San Buenaventura State Beach	Santa Barbara	Ventura, Ventura County			RW'94	1966	882,000	Ventura Marina			R (groin)
San Buenaventura State Beach	Santa Barbara	Ventura, Ventura County			TC'91	1967	449,800		1.0 mi long; 130-200 ft wide		beach erosion control (groin)
San Buenaventura Beach	Santa Barbara	Ventura, Ventura County			Shaw'80	1967	163375	Ventura Harbor	deposited north of groins 7 and 9		
San Buenaventura Beach	Santa Barbara	Ventura, Ventura County			Shaw'80	1973	5228	Ventura Harbor	emergency fill		
San Buenaventura State Beach	Santa Barbara	Ventura, Ventura County			TC'91	1976					harbor bypassing
San Buenaventura State Beach	Santa Barbara	Ventura, Ventura County			FC	January - March '90	100,000 - 150,000	Ventura Harbor	maintenance dredging (Ventura-Pierpont Groin Field)		N, R, DS, DR
San Buenaventura State Beach	Santa Barbara	Ventura, Ventura County			SPCA'76	1967					7 groins & fill
San Buenaventura State Beach	Santa Barbara	Ventura, Ventura County			SPCA'76	1973					groin and fill
South Beach	Santa Barbara	Ventura, Ventura Co.			FC	March - July, 1983	150,000	dredging of Ventura Harbor	hydraulically dredge Harbor mouth; transport through pipe, deposit on dry beach until winter, then bulldoze onto active beach face (b/w Harbor and Santa Clara River mouth)		DS, DR
Ventura	Santa Barbara	Ventura, Ventura Co.			FC	June/July '84	200,000	Ventura Harbor	disposal area: 1000 ft long, high on beach, 2 discharge points	clean sand	
Ventura	Santa Barbara	Ventura, Ventura Co.			ACOE'90	1986	1,000,000	Ventura Harbor	beach fill		DR, DS
Ventura	Santa Barbara	Ventura, Ventura Co.			ACOE'90	1987	550,000	Ventura Harbor	beach fill		DR, DS
Ventura	Santa Barbara	Ventura, Ventura Co.			ACOE'90	1988	800,000	Ventura Harbor	beach fill		DR, DS
Ventura	Santa Barbara	Ventura, Ventura Co.			FC	1997	19,500	Ventura Harbor south jetty repair and modification	either cutter head pipeline dredge or hopper dredge (nearshore)	clean sandy sediments	DS, DR
Marina Park Beach	Santa Barbara	Ventura, Ventura County			FC	12/23/84 - 3/15/85	150,000	Ventura Harbor sand traps and entrance channel	hydraulic dredge	fine sand (>91% on 200 sieve)	R, DS, DR
McGrath State Beach	Santa Barbara	Ventura, Ventura County			TC'91	1970	249,333				harbor bypassing
McGrath State Beach Park	Santa Barbara	Ventura, Ventura County			Shaw'80	1970	244409	Ventura Harbor			
McGrath State Beach Park	Santa Barbara	Ventura, Ventura County			Shaw'80	1971	924049	Ventura Harbor			
McGrath State Beach	Santa Barbara	Ventura, Ventura County			TC'91	1971	942,667				harbor bypassing
McGrath State Beach	Santa Barbara	Ventura, Ventura County			TC'91	1973	764,000				harbor bypassing
McGrath State Beach Park	Santa Barbara	Ventura, Ventura County			Shaw'80	1973	748911	Ventura Harbor			
McGrath State Beach Park	Santa Barbara	Ventura, Ventura County			Shaw'80	1974	320215	Ventura Harbor			
McGrath State Beach	Santa Barbara	Ventura, Ventura County			TC'91	1974	326,667				harbor bypassing
McGrath State Beach	Santa Barbara	Ventura, Ventura County			TC'91	1975	154,667				harbor bypassing
McGrath State Beach Park	Santa Barbara	Ventura, Ventura County			Shaw'80	1975	151612	Ventura Harbor			
McGrath State Beach Park	Santa Barbara	Ventura, Ventura County			Shaw'80	1977	748911	Ventura Harbor			
McGrath State Beach	Santa Barbara	Ventura, Ventura County			TC'91	1977	764,000				harbor bypassing
McGrath State Beach	Santa Barbara	Ventura, Ventura County				1981		dredging of Ballona Creek		black, odoriferous, trashy	DS, DR
McGrath State Beach	Santa Barbara	Ventura, Ventura County			FC	March - July, 1983	750,000	dredging of Ventura Harbor	hydraulically dredge Harbor mouth; transport through pipe, deposit on dry beach until winter, then bulldoze onto active beach face		DS, DR
McGrath State Beach	Santa Barbara	Ventura, Ventura County			TC'91	periodically since 1970		Ventura Marina	maintenance dredging and beach replenishment		harbor bypassing
McGrath State Beach	Santa Barbara	Ventura, Ventura County			TC'89	12/23/84 - 3/15/85		Ventura Harbor sand traps and entrance channel			DR, N
McGrath State Beach	Santa Barbara	Ventura, Ventura County			FC	3/15/85	800,000	Ventura Harbor sand traps and entrance channel	hydraulic dredge; placed ~6100' S of entrance channel	fine sand (>91% on 200 sieve)	R, DS, DR
McGrath State Beach (nearshore)	Santa Barbara	Ventura, Ventura County			FC	9/15 - 3/15	600,000	Ventura Harbor	clamshell and hopper dredge alternatives proposed		DS, DR
McGrath State Beach (surf and/or nearshore)	Santa Barbara	Ventura, Ventura County			FC	9/15/94 - 3/15/95	800,000	Ventura Harbor sand traps and entrance channel	hydraulic, hopper and/or clamshell dredges; beach, surf zone, and/or nearshore disposal (<30'MLLW)	predominantly sandy	R, DS, DR

TABLE2TASK3CSMW.xls

Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also	
USACOE			scheduled during grunion spawning, but deposition in surf zone; monitoring planned to determine impacts	beach profile monitoring to document impacts of single-pt surf zone disposal on grunion		CD-009-86			
USACOE			grunion			CD-025-86		CD-2-83; CD-12-84; CD-25-84	
USACOE						CD-046-89			
USACOE			impacts to grunion spawning if contingency dredging necessary; creation of sand traps in harbor intended to mitigate need for this dredging	effects of March disposal on grunion spawning		CD-040-92		CD-25-86; CD-46-89	
USACOE				April extension to monitor impacts of surf zone disposal on grunion		CD-032-93		CD-21-83; CD-25-86; CD-46-89; CD-58-90; CD-79-91; ND-4-92; CD-40-92	
USACOE				nightly surveys of grunion to detect onset of spawning		CD-048-98		CD-21-83; CD-25-86; CD-46-89; CD-58-90; CD-79-91; ND-4-92; CD-40-92; CD-32-93	
USACOE									
	"migrated south"		"impounded on N side of groins"		source: USACOE-LA 1976; Shaw 1980				
			"accretion on N side of groins"		source: Shaw 1980				
					source: USACOE-LA 1976				
		\$2,157,000 (7 groins plus fill)	"accretion on N side of groins"		source: USACOE-LA 1976; CA Dept of Nav and Ocean Dev 1976;				
	current bypassing has problems				source: Herron 1987				
USACOE		\$2,157,000 \$370,000		beach profiles by Ventura Port District, annually in September		CD-036-89			
					source: CA-DNOD 1976 source: CA-DNOD 1976				
USACOE						CD-002-83	CDP 4-83-257A (in lieu of CD-43-88; CD-17-89)	CD-25-84; CD-30-85; CD-42-88; CD-17-89	
USACOE			to mitigate impacts to access, Corps will fill beach in stages; will operate single discharge points to mitigate tern and grunion impacts		2600 ft beach frontage	CD-025-84	CP 4-83-257		
USACOE		Section 111, RHA 1968							
USACOE		Section 111, RHA 1968							
USACOE		Section 111, RHA 1968							
USACOE					sand dredged from around pier; will be placed either in sand trap to be dredged with next maintenance dredging or directly into nearshore somewhere downdrift.	CD-168-97			
USACOE			least turn nesting, brown pelican (dredging)	Corps will monitor to define erosion issues	disposal site ~1400 ft long, from first groin in Pierpont groin field source: Shaw 1980	CD-030-85		CD-25-84; CD-42-88; CD-17-89	
					source: Shaw 1980 source: Shaw 1980				
					source: Shaw 1980 source: Shaw 1980				
					source: Shaw 1980				
LA Co/ USACOE			storing sand in backshore until winter to avoid grunion and least turn spawning season		noted in CD-02-83				
USACOE			storing sand in backshore until Sept. 1 to avoid grunion and least turn spawning season		dredging-induced opportunistic surf zone nourishment was conducted prior to this project	CD-002-83			
			"1977: Effect of bypassing overshadowed by extremely high sediment flows in Santa Clara River."		source: Shaw 1980 source: Shaw 1980				
USACOE			grunion spawning, salt marsh bird's beak, The Belding's Savannah Sparrow (nourishment); least turn nesting (dredging)		disposal site ~4400 ft long	CD-030-85		CD-25-84; CD-42-88; CD-17-89	
USACOE/Ventura Port District			increased turbidity, loss of O2, loss of benthics, impacts to least tern, grunion	beach profiles by Ventura Port District	nearshore disposal -> berm: -15' MLLW, 4300' long, 900' footprint, b/w -15' and -10' contours	CD-053-91	CDP 4-83-257	ND-42-88; CD-17-89	
USACOE			terns, grunions, plover		beginning 100' S of Santa Clara River mouth and extending S for 4300'	CD-054-94			

TABLE2TASK3CSMW.xls

Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
McGrath State Beach (surf and/or nearshore)	Santa Barbara	Ventura, Ventura County			FC	9/15/98 - 3/15/99; 9/15/99 - 3/15/00; 9/15/00 - 3/15/01; 9/15/01 - 3/15/02; 9/15/02 - 3/15/03; 9/15/03 - 3/15/04;	500,000	Ventura Harbor entrance, navigation channels and sand traps	hydraulic cutterhead pipeline dredge (maybe hopper or clamshell)	>80% sand	DR, R
Silver Strand Beach	Santa Barbara	Port Hueneme, Ventura Co.			RW'94	1973	75000	Channel Islands Harbor maintenance dredging			R
Silver Strand Beach	Santa Barbara	Port Hueneme, Ventura Co.			RW'94	1975	100000	Channel Islands Harbor maintenance dredging			R
Silver Strand Beach	Santa Barbara	Port Hueneme, Ventura Co.			RW'94	1977	100000	Channel Islands Harbor maintenance dredging			R
Silver Strand Beach	Santa Barbara	Port Hueneme, Ventura Co.			RW'94	1981	100000	Channel Islands Harbor maintenance dredging			R
Silver Strand Beach	Santa Barbara	Port Hueneme, Ventura Co.			RW'94	1983	150000	Channel Islands Harbor maintenance dredging			R
Silver Strand Beach	Santa Barbara	Port Hueneme, Ventura Co.			RW'94	1987	378000	Channel Islands Harbor maintenance dredging			R
Silver Strand Beach	Santa Barbara	Port Hueneme, Ventura Co.			FC	9/1/88 - 3/15/89; 9/1/90 - 3/15/91; 9/1/92 - 3/15/93	300,000	maintenance dredging of Channel Islands Harbor sand trap, entrance basin, channel	diesel or electric cutterhead hydraulic dredge; buried hydraulic pipeline (placed 800' downcoast of harbor S jetty)	initially black and smelly	DS, DR
Silver Strand Beach	Santa Barbara	Port Hueneme, Ventura Co.			TC'89	occasionally	200,000/yr	nearby maintenance dredging			N
Silver Strand Beach	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	occasionally	200,000 cu/yr				harbor bypassing
Silver Strand Beach	Santa Barbara	Port Hueneme, Ventura Co.			FC	Sept. '83 to March '84	150,000	Channel Islands Harbor	dredged from harbor, transported via buried discharge pipeline	?	DS, DR
Silver Strand Beach	Santa Barbara	Port Hueneme, Ventura Co.			FC	10/94 - 3/95; 10/96 - 3/97; 10/98 - 3/99	6,900,000 (over 6 years)	Channel Islands Harbor and Port Hueneme	maintenance dredging	predominantly sandy	DR, R
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura Co.			TC'89	1935-1940	1,500,000	excavation of Port Hueneme harbor			R
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1939	2,614,000	Port Hueneme harbor excavation			
Hueneme Beach	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1940	1,360,000	excavation			Harbor construction
Hueneme Beach	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1941					
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1953-1954	1,986,640	Port Hueneme	bypassed		
Hueneme Beach	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1954	2,033,000				harbor bypassing
Hueneme Beach	Santa Barbara	Port Hueneme, Ventura Co.			RW'94	1960	3,700,000	Channel Islands Harbor excavation			harbor construction
Hueneme Beach	Santa Barbara	Port Hueneme, Ventura Co.			TC'89	1960		Channel islands harbor excavation and bypassing			B, N
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1960-1961	6,234,390	Channel Islands Harbor sand trap			
Hueneme Beach	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1961	6,000,000	Channel Islands harbor			Harbor construction
Hueneme Beach	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1963	1,986,000				harbor bypassing
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1963	1984026	Channel Islands Harbor sand trap			
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1965	3524979	Channel Islands Harbor sand trap			
Hueneme Beach	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1965	3,527,000				harbor bypassing
Hueneme Beach	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1968	1,704,000				harbor bypassing
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1968	1670346	Channel Islands Harbor sand trap			
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1969-1970	2722481	Channel Islands Harbor sand trap	initially widened beach 30 m		
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1970	2,777,333		widened beach 99 ft		harbor bypassing
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1971	2,533,333		widened beach 99 ft		harbor bypassing
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1971	2483300	Channel Islands Harbor sand trap and entrance channel			
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1973	2483300	Channel Islands Harbor sand trap and entrance channel			
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1973	2,533,333				harbor bypassing
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1975	109,788	Port Hueneme			
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1975	1,768,000				harbor bypassing
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1975	1623294	Channel Islands Harbor sand trap and entrance channel			
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			Shaw'80	1977	2483300	Channel Islands Harbor sand trap and entrance channel			
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura Co.			TC'91	1977	2,533,333				harbor bypassing
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura Co.			TC'89	1941, 1943, 1954,					R
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			FC	1985? In the future	61,000	Channel A, Port Hueneme, below +1' MLLW	hydraulic dredge from MLLW down to -20'; placed in surf zone unless grunion season; then placed above H20 line	compatible w/ local sediment	N, R, DS, DR
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura Co.			TC'89	every two years since 1960		Channel Island Harbor and Port Hueneme Harbor bypassing			B, N
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			FC	October '84 to March '85	2,000,000	Channel Islands Harbor (sand trap and entrance channel)	hydraulic cutterhead dredge; deposited hydraulically via buried pipeline (+10 ft MLLW, 50 ft. from HWL); (downcoast of E. Jetty to beyond pier)		R, DS, DR

TABLE2TASK3CSMW.xls

Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also
USACOE			grunion, least terns, snowy plovers; single point diked discharge to minimize turbidity; discharge further than 200' from mouth of Santa Clara River to minimize impacts to steelhead trout in estuary			CD-64-98		CD-54-94; CD-53-91; CD-42-88; CD-51-86; CD-30-85; CD-2-83
					source: USA/CESPL as given in Noble 89 as given in Wiegel '94			
					source: USA/CESPL as given in Noble 89 as given in Wiegel '94			
					source: USA/CESPL as given in Noble 89 as given in Wiegel '94			
					source: USA/CESPL as given in Noble 89 as given in Wiegel '94			
					source: USA/CESPL as given in Noble 89 as given in Wiegel '94			
USACOE					3000' along beach source: CA-DNOD 1977; Armstrong 1987	CD-004-89		CD-25-83; CD-53-84; CD-43-86/CD-60-86
					source: Herron and Harris 1966; Armstrong 1987			
USACOE						CD-025-83	CDP 4-83-257	
USACOE			need to protect least terns, grunions, snowy plover; limit post-March 31 disposal to diked or single-point disposal; map for plovers pre-disposal; mitigate impacts to pismo clams			CD-052-94		CD-4-89; CD-7-89; CD-80-86; CD-43-86; CD-53-84; CD-25-83; CD-15-90; CD-12-85
	3 years							
	total loss and beyond win 3 years	\$295,800			source: USACOE-LA 1954 source: USACOE-LA 1954			
					"Plan only partially successful. Bypassed only half the planned volume, b/c of difficulty of dredging in surf zone. Gave temporary respite, but by 1958, city of Port Hueneme again building emergency seawall." source: USACOE-CERC 1984			
		\$1,250,000			source: Herron 1987; Herron and Harris 1966			
		\$951,000			source: Herron and Harris 1966			
		\$852,000	"Of 14M cy pumped to feeder beach b/w 1960 and 1966, some 9M cy have moved on downcoast."		source: Herron and Harris 1966 source: Shaw 1980, Herron and Harris 1966			
					source: Shaw 1980 source: Shaw 1980			
					source: Shaw 1980			
					source: Shaw 1980			
	bypassing has overcome problem				source: Shaw 1980; Armstrong 1987; Herron 1987; USACOE-CERC 1984			
					source: Hall 1952; Herron and Harris 1962)			
USACOE					additional 163,000 yd ³ needed to be dredged/disposed in 1986	CD-012-85	CDP 4-86-204	
					source: Shaw 1980			
USACOE			coverage/disturbance/elimination of benthic communities; turbidity; fish displacement			CD-053-84		CD-25-83; CD-12-85; CD-62-87

TABLE2TASK3CSMW.xls

Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			FC	Sept. '83 to March '84	1,350,000	Channel Islands Harbor	dredged from harbor, transported via buried discharge pipeline	?	DS, DR
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			FC	Sept. '83 to March '84	200,000	Hueneme Harbor	dredged from harbor, transported via buried discharge pipeline	clean sand	DS, DR
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			ACOE'90	1987	2,000,000	Channel Islands Harbor	beach disposal		DR, DS
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			FC	3/15/87 - 5/30/87	500,000	Channel Islands harbor entrance, basin, sand trap	routine dredging; diesel dredge; bermed disposal site >25' from highest contour of wave runup, 1700' long, 7' above MLLW; single return water discharge point	littoral drift material	DS, DR
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			FC	1989	2,200,000	Channel Islands Harbor sand trap, entrance basin, channel	diesel or electric cutterhead hydraulic dredge; hydraulic pipeline on beach surface	initially black and smelly	DS, DR
Hueneme Beach Park	Santa Barbara	Port Hueneme, Ventura County			FC	10/94 - 3/95; 10/96 - 3/97; 10/98 - 3/99	6,900,000 (over 6 years)	Channel Islands Harbor and Port Hueneme	maintenance dredging	predominantly sandy	DR, R
Hueneme Beach	Santa Barbara	Port Hueneme, Ventura County			FC	1999-2000	630,000	Port Hueneme	maintenance dredging; on or nearshore disposal		clean sediment
Pacific Missile Range	Santa Barbara	Point Mugu, Ventura County			TC'89	1947	700,000	Mugu lagoon			DR, N
Pacific Missile Range	Santa Barbara	Point Mugu, Ventura County			TC'91	1947	709,333				
Pacific Missile Range	Santa Barbara	Point Mugu, Ventura County			Shaw'80	1947	695,324	Mugu Lagoon		fill degraded rapidly	
Pacific Missile Range	Santa Barbara	Point Mugu, Ventura County			RW'94	1961			3 groins constructed with fill	sand	groins and fill
Las Tunas Beach	Santa Monica	Malibu, Los Angeles Co.			TC'89	1960-1974	50,000				R
Las Tunas Beach	Santa Monica	Malibu, Los Angeles Co.			TC'91	1960-1974	~50,000				beach erosion control
Will Rogers State Beach	Santa Monica	Pacific Palisades, Los Angeles Co			TC'91						
Santa Monica State Beach	Santa Monica	Santa Monica, Los Angeles Co.			TC'91	1939					
Santa Monica Beach	Santa Monica	Venice Beach, Los Angeles County			Shaw'80	1939	60,122	Santa Monica Breakwater	Ocean Park to Santa Monica Pier		
Santa Monica State Beach	Santa Monica	Santa Monica, Los Angeles Co.			TC'91	1943	150,000				beach erosion control
Santa Monica Beach	Santa Monica	Venice Beach, Los Angeles County			Shaw'80	1949	396,021	Santa Monica Breakwater	deposited from Ocean Park Pier to Santa Monica Pier		
Santa Monica State Beach	Santa Monica	Santa Monica, Los Angeles Co.			TC'91	1950	1,000,000				
Santa Monica State Beach	Santa Monica	Santa Monica, Los Angeles Co.			TC'89	1939, 1949, 1950					R
Santa Monica State Beach	Santa Monica	Santa Monica, Los Angeles Co.			RW'94	1945	150,000				R
Santa Monica State Beach	Santa Monica	Santa Monica, Los Angeles Co.			LHW'94	1939	60,000	Santa Monica Breakwater bypassing	bypassed		
Santa Monica State Beach	Santa Monica	Santa Monica, Los Angeles Co.			LHW'94	1949-50	960,000	Santa Monica Breakwater bypassing	bypassed		
Santa Monica State Beach	Santa Monica	Santa Monica, Los Angeles Co.			LHW'94	1957-58	780,000	Santa Monica Breakwater bypassing	bypassed		
Venice City Beach	Santa Monica	Venice, Los Angeles County			LHW'94	1945	150,000	Hyperion excavation			DS
Venice City Beach	Santa Monica	Venice, Los Angeles County			RW'94	1945	150,000	Hyperion sewage disposal plant			erosion control
Venice City Beach	Santa Monica	Venice, Los Angeles County			TC'89	1945	140,000	nearby dunes	trucked from dunes to beach		R
Venice City Beach	Santa Monica	Venice, Los Angeles County			TC'91	1945	140,000		0.6 mi long; 75 ft fill width		beach restoration
Venice Beach	Santa Monica	Venice Beach, Los Angeles County			Shaw'80	1945	148,998	Santa Monica Breakwater	Venice Pier to Washington St.		
Venice City Beach	Santa Monica	Venice, Los Angeles County			RW'94	1947		Hyperion sewage disposal plant			R
Venice Beach	Santa Monica	Venice Beach, Los Angeles County			Shaw'80	1948	1,390,648	Santa Monica Breakwater	El Segundo to Ocean Park; widened beach ~180 m (x ft)		
Venice City Beach	Santa Monica	Venice, Los Angeles County			RW'94	1973	17,000	entrance of Marina Del Rey			maintenance dredging
Venice City Beach	Santa Monica	Venice, Los Angeles County			TC'89	1975	11,000				R
Venice City Beach	Santa Monica	Venice, Los Angeles County			TC'91	1975	11,000				
Venice Beach	Santa Monica	Venice Beach, Los Angeles County			Shaw'80	1975	10,456	Marina Del Rey	bypassing		
Venice City Beach	Santa Monica	Venice, Los Angeles County			FC	March - May 1998	<123,000	Marina Del Rey Harbor (sand trap)	either hopper dredge, clamshell dredge with disposal barge or hydraulic cutterhead with pipeline; pipeline w/ single-pt. discharge in intertidal zone	99% sand	DS, DR
Venice City Beach/Dockweiler	Santa Monica	Venice, Los Angeles County			LHW'94	1947	13,900,000	Hyperion excavation			DS
Venice City Beach/Dockweiler	Santa Monica	Santa Monica, Los Angeles Co.			RW'94	1946-48	~14,000,000	Hyperion sewage disposal plant excavation	hydraulically excavated from sand dunes		DS, R
Venice City Beach/Dockweiler	Santa Monica	Santa Monica, Los Angeles Co.			TC'89	1947-48	14,000,000	Hyperion sewage disposal plant excavation		sand from sand hills	R
Venice City Beach/Dockweiler	Santa Monica	Playa Del Rey, Los Angeles County			Shaw'80	1948	13,984,900	nearby sand hills (Hyperion excavation)	sand hydraulically removed from hills, transported to beach via discharge pipes		
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			LHW'94	1938	1,800,000	Hyperion excavation			DS
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles County			Shaw'80	1938	1,803,660	nearby sand hills			
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			LHW'94	1969	389,000	Marina Del Rey Harbor (sand trap) bypassing	bypassed		
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			LHW'94	1975	10,000	Marina Del Rey Harbor (sand trap) bypassing	bypassed		
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			LHW'94	1981	217,000	Marina Del Rey Harbor (sand trap) bypassing	bypassed		
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			LHW'94	1987	35,000	Marina Del Rey Harbor (sand trap) bypassing	bypassed		
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			TC'89	1938	1,800,000	nearby hills	Dockweiler: from El Segundo/LA City border to Marina Del Rey		R
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			TC'91	1938	1,840,000				upland excavation fill

TABLE2TASK3CSMW.xls

Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also	
USACOE			no fill deposition after March 31 due to grunion spawning; avoid least tern nesting			CD-025-83	CDP 4-83-473	CD-53-84; CD-12-85;	
USACOE						CD-025-83	CDP 4-83-257		
USACOE		Section 111, RHA 1968							
USACOE			disposal site diked to minimize impacts to grunion; return flow clearer due to dike decanting		notes ocean disposal is more costly than beach disposal	CD-060-86		CD-43-86; CD-25-83; CD-53-84	
			use of diked beach disposal proposed to minimize impacts to grunion spawning after March 15			CD-004-89		CD-25-83; CD-53-84; CD-43-86/CD-60-86	
USACOE			need to protect least terns, grunions, snowy plover; limit post-March 31 disposal to diked or single-point disposal; map for plovers pre-disposal			CD-052-94			
DR, DS	USACOE					CD-030-99			
	degraded rapidly								
	fill downgraded rapidly				source: Shaw 1980				
					source: USACOE-LA 1974				
					source: USCOE-LA (Las Tunas) 1974				
					source: Griggs and Savoy 1986				
					source: Shaw 1980				
		\$88,000							
					source: USACOE-LA 1986 (oral)				
		\$250,000	*Nullified downdrift erosion damage caused by Santa Monica breakwater and resultant. Today's beach is totally artificial & much wider today than natural beach of 50 years ago.*		source: Hall 1952				
	major portion there after 4yrs				source: Johnson 1950				
	1949 still there; estimated life=10 yr	\$10,500			sources: Johnson, 1950; Hall 1952; Shaw 1980				
		\$7,000			source: Shaw 1980				
					source: Shaw 1980				
USACOE			severe impacts to least tern nesting			CD-002-98			
	1 mil.yd ³ /yr initially				widened beach to avg. width of 600' (Johnson 1950) to 800' (Kenyon 1950)				
					source: Shaw 1980				
					source: Shaw 1980				

TABLE2TASK3CSMW.xls

Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			RW'94	1956	2,400,000	electric power plant excavation	"placed along 8,600 ft of Dockweiler beach southerly from the Ballona Creek jetties. Bulldozers, conveyor belts and dump trucks were used to move the sand."		upland excavation fill
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			LHW'94	1956	2,400,000	Scattergood power plant			DS
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles County			Shaw'80	1962	3,202,150	Marina Del Rey	downcoast of Ballona Creek		
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			LHW'94	1960-62	3,200,000	Marina Del Rey			DS
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			TC'91	1962	3,000,000				harbor construction
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			LHW'94	1963	6,900,000	Marine Del Rey			DS
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			TC'91	1963	<7,022,667				
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			RW'94	1969	389,000	entrance of Marina Del Rey			maintenance dredging
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			TC'91	1975	10,667				
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			RW'94	1981	217,000	entrance of Marina Del Rey			maintenance dredging
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			RW'94	1987	35,000	entrance of Marina Del Rey			maintenance dredging
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			ACOE'90	1987	31,000	Marine Del Rey	beach fill		DR_DS
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			FC	February 2, 1987 March 15, 1987	200,000	Marina Del Rey Harbor entrance and approach channels, and Ballona Creek mouth	electric or diesel dredge; discharge pipeline on sand above supratidal zone	predominantly sand	DS_DR
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			RW'94	1988	155,000	Hyperion excavation expansion			
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			LHW'94	1988	155,000	Hyperion excavation expansion			DS
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			RF '93	1989	1,097,880	Hyperion sewage disposal plant excavation	"transported by conveyor belt...across Pacific Coast Highway to Dockweiler Beach"		R
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			RW'94	1989	1,100,000	Hyperion sewage disposal plant excavation	"The sand was transported from the excavation site by a dry-haul conveyor system through a 9-ft diameter steel casing installed under the 4-lane coastal highway (Vista Del Mar) and the bicycle path seaward of the highway to the beach, then along the beach by conveyor to the placement site (either upcoast or downcoast), and finally handled by use of bulldozers."		R
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			FC	March - May 1998	<123,000	Marina Del Rey Harbor (sand trap)	either hopper dredge, clamshell dredge with disposal barge or hydraulic cutterhead with pipeline; pipeline w/ single-pt. discharge in intertidal zone	99% sand	DS_DR
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			TC'89	occasionally		Marina del Rey	dredging		
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			FC	1999	150,000	Marina Del Rey Harbor		clean sand	DR_DS
Dockweiler Beach	Santa Monica	Playa Del Rey, Los Angeles Co			CDP	1999	215,655	Marina Del Rey	North Jetty dredging and related federal project; to widen beach by 100 ft at end of Torrance Blvd, Redondo Beach and Dockweiler	clean sand	DR_DS
El Segundo	Santa Monica	El Segundo, Los Angeles Co.			TC'89	1936	1,800,000	nearby dunes			R
El Segundo	Santa Monica	El Segundo, Los Angeles Co.			TC'91	1936	1,800,000		1.8 mi long; 200 ft wide		upland excav./ beach rest.
El Segundo	Santa Monica	El Segundo, Los Angeles Co.			TC'89	early 1980s	750,000		in conjunction with groin construction		R
El Segundo	Santa Monica	El Segundo, Los Angeles Co.			TC'91	early 1980s	750,000				beach widening
El Segundo	Santa Monica	El Segundo, Los Angeles Co.			LHW'94	1984	620,000	offshore			nourishment
El Segundo	Santa Monica	El Segundo, Los Angeles Co.			RW'94	1988	550,000	Hyperion excavation expansion	downcoast of Chevron groin		
El Segundo	Santa Monica	El Segundo, Los Angeles Co.			RW'94	1989/90	945,000	Hyperion excavation expansion			R
El Segundo	Santa Monica	El Segundo, Los Angeles Co.			LHW'94	1989-90	945,000	Hyperion excavation expansion			DS
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			LHW'94	1947	100,000	onshore			nourishment
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			TC'91	1947	57,000				beach restoration
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			RW'94	1947	?220,000				
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			TC'89	once during 1940s					R
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			TC'89	once during 1950s					R
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			TC'91	1956-58					navigation/beach erosion control
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			RW'94	1962	?220,000				
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			TC'89	1968	1,400,000	offshore	pumped		R
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			TC'91	1968	1,405,961		1.2 mi long; increased beach to avg width of ~225 ft		beach erosion control
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			RW'94	1968	1,400,000	offshore	7800ft long; source was 30-60 ft below MLLW, ~1700' offshore; "A hopper dredge and floating pipeline operated in a water depth of about 37 ft, and pumped sand to shore."	fill: 0.4-0.7 mm med. Diameter; native 0.5 mm	
Redondo Beach	Palos Verdes	Redondo Beach, Los Angeles County			Shaw'80	1968	1,398,490	offshore	deposited on Redwood Beach, Topaz St. to Malaga Cove, using hydraulic pipeline from 9-20 m below MLLW	~400,00 cy migrated N into King Harbor by mid-1969	
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			LHW'94	1968-69	1,400,000	offshore			nourishment
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			SPCA'76	1970					groin and replenishment
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			TC'91	1971	1,020,000				
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles County			Shaw'80	1971	999,855	offshore	deposited beach using hydraulic pipeline from 9-20 m below MLLW		
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co			FC	proposed 1991	6,000	King Harbor, harbor side of N breakwater	disposal in surf zone	fine to medium grained sands, with only minor amounts of gravel and/or fines	R_DS_DR
Redondo Beach	Santa Monica	Redondo Beach, Los Angeles Co				2000	230,000	nearshore deposits from previous Harbor dredging	transported by barge from dredge site to dump site, then hydraulically pumped from nearshore to onshore		R

TABLE2TASK3CSMW.xls

Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also
					placed in anticipation of downcoast erosion from Marina Del Rey jetties; no serious erosion in 1986. Source: USCOE-LA 1986			
					source: Shaw 1980			
					source: Shaw 1980			
USACOE		Section 111, RHA 1968						
USACOE			no effects on endangered species; time to accommodate grunion			CD-057-86	CDP 129-81	
					source: Woodell and Hollar, 1991			
USACOE			severe impacts to least tern nesting			CD-002-98		CD-23-88; CD-31-91; CD-53-92; CD-68-94; CD-88-94; ND-112-94; ND-22-96
USACOE					result of periodic nourishment: "wide beach stabilized by groins and by the King Harbor breakwater (CA-DNOD 1977)."	CD-022-99		
LA County					1.8 miles of beach; source: Hall 1952		App. #5-99-232 (PE-LB)	
					source: Hall 1952			
Chevron USA, Inc				3 years required by permit; no report	source: Pratt 1984			
					source: Coastal Frontiers Corp. 1992			
		\$7,000			source: Hall 1952			
LA County								
					source: USACOE-LA 1959 (So. Cal.)			
USACOE	by mid-1969 30% of fill had migrated N				source: USACOE 1970, Shaw 1980			
	30% lost in year 1; reshaped and terminated successfully	\$1,500,000	sand tends to migrate N and S; causes shoaling in King Harbor, Redondo Harbor		sources: Shaw 1980; USACOE-LA 1970; Saville 1981			
		\$2,400,000			source: CA-DNOD 1976			
	destroyed, winter 1983	\$2,400,000			source: Pipkin 1986; questioned and doubted by Weigel 1994 for lacking original source			
USACOE			exceptionally dense marine fauna			CD-025-91		
city of Los Angeles			beach is 180 ft. wide		from http://beaches.co.la.ca.us/scripts/redondo1.htm			

TABLE2TASK3CSMW.xls

Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Santa Monica Bay Beaches	Santa Monica	Santa Monica, Los Angeles Co.			RF '93	1947	14,377,000	Hyperion sewage disposal plant excavation			upland excavation fill
Santa Monica Bay Beaches	Santa Monica	Santa Monica, Los Angeles Co.			RF '93	1960-1963	10,063,900	Marina Del Rey excavation			harbor excavation
Santa Monica Bay Beaches	Santa Monica	Santa Monica, Los Angeles Co.			TC'91	1947-1948	14,000,000				upland excavation fill
Cabrillo Beach	San Pedro	San Pedro, Los Angeles Co.			TC'89	1927			~7 mi. long; avg. beach width 600-800 ft		R
Cabrillo Beach	San Pedro	San Pedro, Los Angeles Co.			TC'91	1927	500,000		0.2 mi long; beach width 200ft		beach restoration
Cabrillo Beach	San Pedro	San Pedro, Los Angeles Co.			RW'94	1927	500,000	Outer LA Harbor			
Cabrillo Beach	San Pedro	Los Angeles, Los Angeles County			Shaw'80	1927	496680	Fillet south of San Gabriel River jetty		migrated E along breakwater into harbor	
Cabrillo Beach	San Pedro	Los Angeles, Los Angeles County			Shaw'80	1948	2866251	Fillet south of San Gabriel River jetty		migrated into harbor and offshore	
Cabrillo Beach	San Pedro	San Pedro, Los Angeles Co.			TC'91	1948	2,536,500		0.4 mi long; beach width 500 ft		beach restoration
Cabrillo Beach	San Pedro	San Pedro, Los Angeles Co.			RW'94	1948	2,900,000	Outer LA Harbor			
Cabrillo Beach	San Pedro	Los Angeles, Los Angeles County			Shaw'80	1963	1202440	Los Angles Harbor, West Basin		stabilized beach at groin	
Cabrillo Beach	San Pedro	San Pedro, Los Angeles Co.			RW'94	1963	1,200,000	West Basin, LA Harbor	pumped		
Cabrillo Beach	San Pedro	San Pedro, Los Angeles Co.			TC'89	1964	1,300,000		in conjunction with terminal groin built in 1962		R
Cabrillo Beach	San Pedro	San Pedro, Los Angeles Co.			TC'91	1964	1,226,667				navigation
Cabrillo Beach	San Pedro	San Pedro, Los Angeles Co.			RW'94	1991	220,000	Hyperion facility	trucked	coarser than original sand	
Long Beach	San Pedro	Long Beach, Los Angeles Co.			TC'91	1955					harbor construction
Long Beach	San Pedro	Long Beach, Los Angeles Co.			TC'91	1942-43	>6,000,000		~4 mi long		beach widening/ navigation
Long Beach	San Pedro	Long Beach, Los Angeles Co.			TC'91	1945-46	800,000				navigation
Long Beach	San Pedro	Long Beach, Los Angeles Co.			RW'94	1943-46	~6,000,000	Los Angeles River delta	placed along 4 miles from Rainbow Pier east to - Belmont Pier		flood control dredging
Long Beach	San Pedro	Long Beach, Los Angeles Co.			RW'94	1945-46	800,000	channel dredged in Alamitos Bay	placed along beach updrift of entrance channel to Bay		
Long Beach City Beach	San Pedro	Long Beach, Orange Co.			Shaw'80	1946	794656	Alamitos Bay Channel			
Long Beach	San Pedro	Long Beach, Los Angeles Co.			TC'89	1946 to 1989	9,000,000 +				R
Long Beach	San Pedro	Long Beach, Los Angeles Co.			TC'91	1975-85	~2,026,670		beach 300-1200 ft wide		navigation
Long Beach	San Pedro	Long Beach, Los Angeles Co.			FC	1996-1998	109,000	Golden Shore Public boat launch	4000 truck trips (placed b/w 1st Pl and 15th Pl.)	90-95% sand = fill; 88.6 - 99.2% sand = site	DR, R
Long Beach (surf zone)	San Pedro	Long Beach, Los Angeles Co.			FC	1999	100-120,000	West Basin, Long Beach Harbor	disposal in surf zone west of Alamitos Bay west jetty		DR, R
Seal Beach	San Pedro	Seal Beach, Orange County			LAD93-1	1954	800,000				
Seal Beach	San Pedro	Seal Beach, Orange County			LAD93-1	1955	400,000	Long Beach Marina excavation			replenishment
Seal Beach	San Pedro	Seal Beach, Orange County			LAD93-1	1956	200,000	Outer Anaheim Harbor			replenishment
Seal Beach	San Pedro	Seal Beach, Orange County			TC'91	1958	800,000				
Seal Beach	San Pedro	Seal Beach, Orange County			RW'94	1959	?250,000 or 200,000	San Gabriel River or Navy harbor	placed on SE section of beach bisected by groin		
Seal Beach	San Pedro	Seal Beach, Orange County			Shaw'80	1959	248330	Anaheim Bay			
Seal Beach	San Pedro	Seal Beach, Orange County			LAD93-1	1959	225,000	?			replenishment
Seal Beach	San Pedro	Seal Beach, Orange County			SPCA'76	1960					groin and fill
Seal Beach	San Pedro	Seal Beach, Orange County			TC'91	1960	250,000		1.0 mi long		beach erosion control
Seal Beach	San Pedro	Seal Beach, Orange County			LAD93-1	1967	70,000	San Gabriel River			replenishment
Seal Beach	San Pedro	Seal Beach, Orange County			TC'91	1968	70,000				
Seal Beach	San Pedro	Seal Beach, Orange County			LAD95	1983	250,000	Anaheim Bay Naval Weapons Station			R
Seal Beach	San Pedro	Seal Beach, Orange County			FC	1983	350,000	Anaheim Bay Naval Weapons Station	dredged via hydraulic suction dredge; discharged into intertidal zone from 16-26" diameter pipeline running from harbor entrance to beach; Sept. '82 - Feb. '83		R, DS, DR
Seal Beach	San Pedro	Seal Beach, Orange County			RW'94	1983	250,000	Anaheim Bay Naval Weapons Station	maintenance dredging		
Seal Beach	San Pedro	Seal Beach, Orange County			P,Y'89	1983	250,000	Anaheim Bay Naval Weapons Station			
Seal Beach	San Pedro	Seal Beach, Orange County			LAD93-1	1983	80,000 - 250,000	Anaheim Bay Naval Weapons Station	dredged from Bay approach and placed on East Beach	very fine sand	replenishment
Seal Beach	San Pedro	Seal Beach, Orange County			LAD93-1	1988	110,000	Anaheim Bay Naval Weapons Station	dredged from Outer Bay and placed on East Beach		replenishment
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1945	202,000	Anaheim Bay Naval Weapons Station			R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			P,Y'89	1945	202,000	Anaheim Bay Naval Weapons Station			R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1945	202,000	Anaheim Bay Anaheim Bay Naval Weapons Station	new harbor construction		
Surfside-Sunset Beach	San Pedro	Huntington Beach, Orange Co.			Shaw'80	1945	201278	Santa Ana River		eroded steadily	
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			TC'91	1945	205,333				
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1947	1,220,000	Anaheim Bay Naval Weapons Station			R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			P,Y'89	1947	1,220,000	Anaheim Bay Naval Weapons Station			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1947	1,220,000	Anaheim Bay Anaheim Bay Naval Weapons Station	new harbor construction		
Surfside-Sunset Beach	San Pedro	Huntington Beach, Orange Co.			Shaw'80	1947	1,220,738	Santa Ana River		eroded steadily	
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			TC'91	1947	1,245,333				
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1956	874,000	Anaheim Bay Naval Weapons Station			R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			P,Y'89	1956	874,000	Anaheim Bay Naval Weapons Station			

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Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also
					source: Flick 1993			
	initial losses 1cm/yr				source: Flick 1993			
			sand migrated E into harbor		sources: Johnson, 1950; Kenyon, 1950; USACOE 1986 (oral)			
	migrated E into LA harbor	\$100,000			source: Hall 1952; Shaw 1980			
	"sand moved away"				source: USA/CESPL Cabrillo Report, 1989			
	migrated E into LA harbor and offshore	\$1,014,600			source: Hall 1952; Shaw 1980			
	"sand moved away"				source: USA/CESPL Cabrillo Report, 1989			
					"successful" but lost in 82/82 and 1988			
			originally cobble beach; eventually covered by sand; stabilized by groin in 1962		source: Shaw 1980			
LA County	10,000 yd ³ /yr lost				source: Shaw 1980; USACOE-LA 1986 (oral)			
	1987: beach is 250-300 ft wide				source: Kenyon 1950; Herron 1987			
	"relatively stable"				source: Kenyon 1950; USACOE-LA 1986 (oral)			
					source: USACOE 1986			
City of Long Beach						CC-98-96	CDP-96-124	CDP 5-94-103
City of Long Beach								
USACOE					source: USACOE-LAD 1993 Rep. 93-1 Table 5-26			
USACOE					source: USACOE-LAD 1993 Rep. 93-1 Table 5-26			
USACOE					source: USACOE-LAD 1993 Rep. 93-1 Table 5-26			
					source: USACOE-LA 1980 (Seal Beach)			
USACOE		\$286,000			source: USACOE-LAD 1993 Rep. 93-1 Table 5-26			
					source: CA-DNOD 1976			
		\$286,000			source: USACOE-LA 1980 (Anaheim); CA Dept of Nav and Ocean Dev 1976			
USACOE					source: USACOE-LAD 1993 Rep. 93-1 Table 5-26			
					source: USACOE-LA 1980 (Anaheim)			
USACOE					source: USACOE-LA 1995 (Surfside-Sunset/Newport)			
USACOE			mortality of intertidal invertebrates; temporary increase in turbidity; nourishment timed to avoid grunion spawning			CD-011-82		
USACOE	quickly lost from littoral zone				source: USACOE-LAD 1993 Rep. 93-1 Table 5-26			
USACOE					source: USACOE-LAD 1993 Rep. 93-1 Table 5-26			
USACOE					source: USACOE-LA 1995 (Surfside-Sunset/Newport)			
USACOE								
	steady loss, <2yr				source: Shaw 1980; Marx 1967			
USACOE					source: USACOE-LA 1995 (Surfside-Sunset/Newport)			
	steady loss				source: Shaw 1980; Marx 1967			
USACOE					source: USACOE-LA 1995 (Surfside-Sunset/Newport)			

TABLE2TASK3CSMW.xls

Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1956	874,000	Anaheim Bay Anaheim Bay Naval Weapons Station			
Surfside-Sunset Beach	San Pedro	Huntington Beach, Orange Co.			Shaw'80	1956	873076	Santa Ana River		eroded steadily	
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			TC'91	1956	890,667				
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			TC'91	1961			restored beach buffer		emergency
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1964	4,000,000	Anaheim Bay Naval Weapons Station			R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1964	1,315,000	Anaheim Bay Naval Weapons Station			R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD99	1964	4,000,000	Seal Beach Naval Weapons Station	created feeder beach, 500' wide x 9200' long; June		R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			P,Y'89	1964	4,000,000	Anaheim Bay Naval Weapons Station			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			P,Y'89	1964	1,315,000	Anaheim Bay Naval Weapons Station			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1964	4,000,000	Anaheim Bay Anaheim Bay Naval Weapons Station	construction/channel deepening		
Surfside-Sunset Beach	San Pedro	Huntington Beach, Orange Co.			Shaw'80	1964	3999420	Anaheim Bay	initially expanded 150 m (x ft) in width (2790m/xft long)	migrated south	
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			TC'91	1964	4,000,000		1.7 mi long; ~450 ft wide feeder beach		beach erosion control
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1971	2,260,000	Anaheim Bay Naval Weapons Station			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD99	1971	2,300,000	Seal Beach Naval Weapons Station	May		R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			P,Y'89	1971	2,250,000	Anaheim Bay Naval Weapons Station			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1971	2,260,000	Anaheim Bay Anaheim Bay Naval Weapons Station			
Surfside-Sunset Beach	San Pedro	Huntington Beach, Orange Co.			Shaw'80	1971	2258496	Anaheim Bay	bypassing?		
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			SPCA'76	1971					replenishment
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			TC'91	1971	2,364,000		1.1 mi long		beach erosion control
Surfside-Sunset Beach	San Pedro	Huntington Beach, Orange Co.			Shaw'80	1978	1489980	offshore			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1979	1,664,000	offshore borrow			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD99	1979	1,600,000	offshore borrow	June: onto feeder beach		DR, R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			P,Y'89	1979	1,544,000	offshore borrow			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1979	1,644,000	offshore			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			TC'91	1979	1,664,000		1.7 mi long; 500 ft wide		beach erosion control
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			87-10	1982	1,500,000				
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1983	500,000	Anaheim Bay Naval Weapons Station			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			P,Y'89	1983	500,000	Anaheim Bay Naval Weapons Station			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1983	500,000	Anaheim Bay Anaheim Bay Naval Weapons Station			maintenance dredging
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			FC	1983	150,000	dredging of Anaheim Bay	discharged into intertidal zone from 16-26" diameter pipeline running from harbor entrance to beach; Sept. '82 - Feb. '83		R, DS, DR
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1984	1,500,000	offshore borrow			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1984	650,000	Anaheim Bay Naval Weapons Station			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			P,Y'89	1984	1,500,000	offshore borrow			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			P,Y'89	1984	650,000	Anaheim Bay Naval Weapons Station			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1984	1,500,000	offshore			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1984	650,000	Anaheim Bay Anaheim Bay Naval Weapons Station	construction		
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			FC	1984	1,500,000	3 borrow sites offshore of Anaheim Bay and Surfside Beach (155 acres)	hydraulic suction dredge; discharge via 16-26" diameter pipeline on surface of beach into surf zone; Oct. '83 - March '84	sand with 8% fines	N, R, DR
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			TC'91	1985	2,293,000		1.1 mi long; 480 ft wide		beach erosion control
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD99	1985	2,700,000	offshore borrow sites and Anaheim Bay Naval Weapons Station	dredged from offshore and from adjacent approach channel and placed on feeder beach		DR, R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			TC'91	1987					no project
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1988	180,000	Anaheim Bay Naval Weapons Station	maintenance dredging		
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1990	1,300,000	offshore borrow			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1990	522,000	offshore borrow			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD99	1990	1,800,000	offshore borrow			DR, R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1990	1,300,000	offshore borrow			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			RW'94	1990	522,000	offshore borrow			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD-BNSS	1990	1,826,000		26" cutter head suction dredge, dredged onto beach		DS
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			FC	1990	3,000,000	two borrow sites offshore of Anaheim Bay jetties	dredged by hydraulic suction dredge and transported to the beach by floating pipeline; mid-Sept. 1989 - mid-March 1990	slightly contaminated with PCBs and DDT; composite samples average 8% fines	R, DS, DR

TABLE2TASK3CSMW.xls

Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also
	steady loss				source: Shaw 1980; Marx 1967 source: Marx 1967; Shaw 1980			
USACOE		Stage 1, Public Law 87-874 1962			source: USACOE-LA 1995 (Surfside-Sunset/Newport)			
USACOE		Stage 1, Public Law 87-874 1962			source: USACOE-LA 1995 (Surfside-Sunset/Newport)			
USACOE		Stage 1			source: USACOE-LA 1999 CCSTWS Chapter 4 draft, December			
	~ half of fill lost in two years downcoast	\$2,082,000			source: USACOE-LA 1969; 1986 (report)			
		Stage 4a, Public Law 87-874 1962			source: USACOE-LA 1995 (Surfside-Sunset/Newport)			
USACOE		Stage 4a			source: USACOE-LA 1999 CCSTWS Chapter 4 draft			
		\$1,074,000			source: CA-DNOD 1976			
	"has controlled erosion in this area"				source: USACOE-LA 1980(equity study, unpublished); 1986 (report)			
		Stage 7, Public Law 87-874 1962			source: USACOE-LA 1995 (Surfside-Sunset/Newport)			
USACOE								
	"has controlled erosion in this area"				source: USACOE-LA 1980(Seal Beach); 1986 (report) source: Corps of Engineers records, A. Fuentes, 1986			
USACOE					source: USACOE-LA 1995 (Surfside-Sunset/Newport)			
USACOE			mortality of intertidal invertebrates; temporary increase in turbidity; nourishment timed to avoid grunion spawning		CD report notes that USACOE replenished sand in '56, '64, '71, '79 source: USACOE-LA 1995 (Surfside-Sunset/Newport)	CD-011-82		
					source: USACOE-LA 1995 (Surfside-Sunset/Newport)			
			offshore impacts minimized by creation of shallow multiple, rather than single, dredge pit		previous nourishments by Corps: 1956, 64, 71, 79	CD-036-83		
	"periodic beach nourishment maintains stability"				source: USACOE-LA 1986 (oral and report); CA Dept of Nav and Ocean Dev 1977 (atlas of erosion and study of nourishment)			
USACOE		Stage 8			source: USACOE-LA 1999 CCSTWS Chapter 4 draft			
	required interval: 5-6 years		"stable beach with seasonal variations....sand is eventually transported offshore and south...."		source: Armstrong 1987; Spencer 1987; USACOE-LA 1987(unpublished project summary)			
		Stage 9, Public Law 87-874 1962			source: USACOE-LA 1995 (Surfside-Sunset/Newport)			
USACOE		Stage 9			source: USACOE-LA 1995 (Surfside-Sunset/Newport) source: USACOE-LA 1999 CCSTWS Chapter 4 draft			
USACOE		\$6.9 mill; \$3.78/yd3			M. Change, pers. Communication in report			
USACOE						CD-027-89		CD-11-82; CD-36-83; CD-12-84; CD-40-89; CD-34-90; CD-52-90

TABLE2TASK3CSMW.xls

Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			FC	1997	1,600,000	offshore borrow	March-June		N, DS
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD95	1997	1,600,000	offshore borrow	Oct. '96 - March '97; cutterhead dredge in 30'-45' H2O offshore of Bolsa Chica Beach; floating pipeline to beach disposal in berm 350-900' wide, 5700' long, +/- 13' MLLW dredged from -30' MLLW	slightly finer than receiver beach	R
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			LAD99	1997	1,600,000	offshore borrow			
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			FC	1997			June-July		N
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			FC	1998		3 offshore borrow sites covered under CD-36-83	(East Jetty to Phillips St)		N, R, DS, DR
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			FC	1999	133,000	Anaheim Bay	pump over jetty, spread on beach using bulldozer		DR, DS
Surfside/Sunset Beach	San Pedro	Huntington Beach, Orange Co.			FC	1999	700,000	approach channel, Anaheim Bay	dredge offshore, then discharge behind training dike placed at +/-12 ft MLLW, return H2O downcoast (East Jetty to Phillips St)		N, R, DS, DR
Huntington Beach (Santa Ana River Project)	San Pedro	Huntington Beach, Orange Co.			FC	1988	1,000,000	Santa Ana River			N, DR
Santa Ana River County Beach	San Pedro	Newport Beach, Orange Co.			LAD99	1997	-140,000	Newport Beach (adjacent)	excavated above MSL and transported downcoast to west Newport and placed above MSL		excavation
Newport Beach	San Pedro	Newport Beach, Orange Co.			TC'91	1920					
Newport Beach	San Pedro	Newport Beach, Orange Co.			TC'91	1929					
Newport Beach	San Pedro	Newport Beach, Orange Co.			Shaw'80	1919-1930	1,594,540	Newport Harbor	between Newport Pier and Harbor entrance		
Newport Beach	San Pedro	Newport Beach, Orange Co.			Shaw'80	1933-1935	1,895,150	Newport Harbor	46th St. to Newport Pier		
Newport Beach	San Pedro	Newport Beach, Orange Co.			TC'91	1933-35	1,933,333				
Newport Beach	San Pedro	Newport Beach, Orange Co.			Shaw'80	1934-1936	5,593,960	Newport Harbor	Newport Pier to Newport Harbor Entrance		
Newport Beach	San Pedro	Newport Beach, Orange Co.			TC'91	1934-35	5,706,667				
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1935	3,700,000	Newport Harbor			R
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1935	1,900,000	Newport Harbor			R
Newport Beach	San Pedro	Newport Beach, Orange Co.			RW'94	1935	3,700,000	Newport Harbor			
Newport Beach	San Pedro	Newport Beach, Orange Co.			RW'94	1935	1,900,000	Newport Harbor			
Newport Beach	San Pedro	Newport Beach, Orange Co.			P,Y'89	1935	3,700,000	Newport Harbor			
Newport Beach	San Pedro	Newport Beach, Orange Co.			P,Y'89	1935	1,900,000	Newport Harbor			
Newport Beach	San Pedro	Newport Beach, Orange Co.			DS'85	1935	1,900,000	Newport Harbor	placed between Santa Ana River and Newport Pier		
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1965	124,000	Newport (Balboa)	36th - 47th St.s		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			RW'94	1965	124,000	Newport (Balboa)	36-47 St.s		
Newport Beach	San Pedro	Newport Beach, Orange Co.			P,Y'89	1965	124,000	Newport (Balboa)	36-47 St.s		
Newport Beach	San Pedro	Newport Beach, Orange Co.			TC'91	1965	124,000				
Newport Beach	San Pedro	Newport Beach, Orange Co.			Shaw'80	1965-1967	333,285	Newport Harbor	deposited b/w Newport Pier and 50th St.		
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1966	60,000	Newport (Balboa)	36th - 47th St.s		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			RW'94	1966	60,000	Newport (Balboa)	36-47 St.s		
Newport Beach	San Pedro	Newport Beach, Orange Co.			P,Y'89	1966	60,000	Newport (Balboa)	36-47 St.s		
Newport Beach	San Pedro	Newport Beach, Orange Co.			TC'91	1966	60,000				
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1967	150,000	Newport (Balboa)	36th - 47th St.s		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			RW'94	1967	150,000	Newport (Balboa)	36-47 St.s		
Newport Beach	San Pedro	Newport Beach, Orange Co.			P,Y'89	1967	150,000	Newport (Balboa)	36-47 St.s		
Newport Beach	San Pedro	Newport Beach, Orange Co.			TC'91	1967	150,000				
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1968	494,000	Newport (Balboa)	36th - 47th St.s, with steel groins at 40, 44, 48th St.s)		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1968	264,000	Newport (Santa Ana)	40-46th St.s		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD99	1968	495,000		February: placed on beach between 32nd, 50th Streets with 258' steel sheetpile groin at 40th St.		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD99	1968	246,000		November: placed on beach between 32nd, 50th Streets with groins at 44th St. (191') and 48th St. (200')		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			RW'94	1968	494,000	Newport (Balboa)	36-47 St.s, with steel groins at 40, 44, 48 Sts		
Newport Beach	San Pedro	Newport Beach, Orange Co.			RW'94	1968	264,000	Newport (Santa Ana)	40-46 St.s		
Newport Beach	San Pedro	Newport Beach, Orange Co.			P,Y'89	1968	494,000	Newport (Balboa)	36-47 St.s, with steel groins at 40, 44, 48 Sts		
Newport Beach	San Pedro	Newport Beach, Orange Co.			P,Y'89	1968	254,000	Newport (Balboa)	40-46 St.s		
Newport Beach	San Pedro	Newport Beach, Orange Co.			Shaw'80	1968	494,046	Newport Beach (adjacent)	placed around groin at 40th St.	upcoast eroded severely;	
Newport Beach	San Pedro	Newport Beach, Orange Co.			Shaw'80	1968	240,488	Newport Harbor	44th St. groin; temporarily widened to 30 to 75 m (x to y ft)	downcoast stable	
Newport Beach	San Pedro	Newport Beach, Orange Co.			SPCA'76	1968					2 groins & replenishment
Newport Beach	San Pedro	Newport Beach, Orange Co.			TC'91	1968	494,000		"extended beach berm to avg. width of 250 ft"		beach erosion control
Newport Beach	San Pedro	Newport Beach, Orange Co.			TC'91	1968	240,000		"beach widened to width of 99-248 ft."		beach erosion control
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1969	750,000	Santa Ana River	40-46th St.s, with rock groins at 36, 48, 52, 56th St.s		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD99	1970	874,000	Santa Ana River	February: placed on West Newport Beach between Santa Ana River and 36th St.		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			RW'94	1969	750,000	Santa Ana River	40-46 St.s, with rock groins at 36, 48, 52, 56 Sts		
Newport Beach	San Pedro	Newport Beach, Orange Co.			P,Y'89	1969	750,000	Santa Ana River	40-46 St.s, with rock groins at 36, 48, 52, 56 Sts		
Newport Beach	San Pedro	Newport Beach, Orange Co.			Shaw'80	1969-1970	747,604	Santa Ana River	between groins at 36th, 48th, 52nd, 56th Streets; beach widened to 45 to 106 m (x to y ft)		
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1970	124,000	Santa Ana River	31-46th St.s		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			RW'94	1970	124,000	Santa Ana River	31-36 St.s		
Newport Beach	San Pedro	Newport Beach, Orange Co.			P,Y'89	1970	124,000	Santa Ana River	31-36 St.s		

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Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Newport Beach	San Pedro	Newport Beach, Orange Co.			SPCA'76	1970					4 groins & replenishment
Newport Beach	San Pedro	Newport Beach, Orange Co.			TC'91	1970	900,000	Santa Ana River	1.6 mi length; 150-360 ft wide		beach erosion control/flood control spoils
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1973	350,000	Santa Ana River	28-48ths Sts., with rock groins at 28, 32, 40, 48th St.s		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD99	1973	358,000		March: added on to existing groins at 40th (480') and 44th (470') Streets with rock; new rubblemound groins at 32nd (540') and 28th (600') Streets. Replenished b/w 32nd, 28th Streets		R
Newport Beach	San Pedro	Newport Beach, Orange Co.			Shaw'80	1973	355,504	Santa Ana River	between groins at 28th and 32nd Streets		
Newport Beach	San Pedro	Newport Beach, Orange Co.			RW'94	1973	358,000	Santa Ana River	28-48 St.s, with rock groins at 40, 48, 28, 32 Sts		
Newport Beach	San Pedro	Newport Beach, Orange Co.			P,Y'89	1973	358,000	Santa Ana River	28-48 St.s, with rock groins at 40, 48, 28, 32 Sts		
Newport Beach	San Pedro	Newport Beach, Orange Co.			SPCA'76	1973					3 groins & replenishment
Newport Beach	San Pedro	Newport Beach, Orange Co.			TC'91	1973	358,000				beach erosion control
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1992	1,227,000	Santa Ana River	nearshore deposition		R, nearshore
Newport Beach	San Pedro	Newport Beach, Orange Co.			RW'94	1992	1,300,000	Santa Ana River	dredged from river channel; sieved; placed 300 ft offshore, 20 ft deep water, 3000 ft long mound	fine to medium sand with some rocks	dredging
Newport Beach	San Pedro	Newport Beach, Orange Co.			ACOE95	1992	1,227,000	Santa Ana River	placed in nearshore		
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD95	1997	140,000	Santa Ana County Beach Park	proposed for '96/'97; transport via trucks from beach source site to disposal site 2000' downcoast. Fill characteristics: +2' to -13' MLLW	same as receiver beach	DR, R
Newport Beach	San Pedro	Newport Beach, Orange Co.			LAD99	1997	140,000	Santa Ana County Beach Park	excavated from above MSL, transported downcoast and placed above MSL		excavation
Corona State Beach	San Pedro	Newport Beach, Orange Co.			ACOE93	1935	?	Newport Bay entrance channel			N
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			TC'91	1928-30	"considerable amount"				upland excavation spoils
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			TC'89	1930					R
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			SPCA'76	1964					groin and fill
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			RW'94	1964	94,000	San Juan Creek	1400' pocket beach created between N training wall of creek and Dana Point Harbor E breakwater		
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			TC'91	1964	94,000		0.3 mi. long; 100-300 ft wide beach		beach erosion control
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			NRC'94	1964	94,104		~1400 ft. long; constructed with sand tight rubblemound jetty to Dana Point Harbor		DS
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			Shaw'80	1964	94104	San Juan Creek	placed upcoast of creek and retained by groin (N training wall)		
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			RW'94	1966	690,000	Camp Pendleton terrace deposits	hailed by truck; placed E from San Juan Creek for ~4500 ft		
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			SPCA'76	1966					replenishment
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			TC'91	1966	840,000		0.9 mi. long; 100-300 ft wide beach		beach erosion control
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			Shaw'80	1966	840401	San Juan Creek	downcoast bank creek	migrated south	
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			Shaw'80	1969	364653	San Juan Creek	upcoast of creek		
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			TC'91	1969	365,000				
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			RW'94	1969	212,000	San Juan Creek flood control	restoration dredging		
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			TC'91	1970	128,000				
Doheny State Beach Park	Oceanside	Dana Point City, Orange Co.			TC'91	1970	906,667				
Capistrano Beach Park (nearshore)	Oceanside	Dana Point City, Orange Co.			Shaw'80	1970	125472	Dana Point Harbor	deposited downcoast of harbor as surfing reef		
Capistrano County Beach (nearshore)	Oceanside	Dana Point City, Orange Co.			CDP	1997	35,500	Dana Point Harbor (West Breakwater)		96% sand	DR, N
San Onofre State Beach	Oceanside	San Onofre, San Diego County			TC'89	occasionally since 1964		SONGS power plant excavation	deposited as hump in 1984		R
San Onofre State Beach South	Oceanside	San Clemente, San Diego County			RW'94	1964	306,000	SONGS power plant excavation	placed SE of SONGS to nourish beach		
San Onofre State Beach	Oceanside	San Onofre, San Diego County			TC'91	1964	204,000				upland excavation fill
San Onofre State Beach	Oceanside	San Onofre, San Diego Co.			Shaw'80	1964	203892	SONGS bluff excavation	placed south of pipeline		
San Onofre State Beach	Oceanside	San Onofre, San Diego Co.			Shaw'80	1966	254865	SONGS bluff excavation	placed south of pipeline		
San Onofre State Beach	Oceanside	San Onofre, San Diego County			TC'91	1966	255,000				upland excavation fill
San Onofre State Beach	Oceanside	San Onofre, San Diego County			TC'91	1967	10,000				upland excavation fill
San Onofre State Beach	Oceanside	San Onofre, San Diego Co.			Shaw'80	1967	10456	SONGS bluff excavation	placed south of pipeline		
San Onofre State Beach	Oceanside	San Onofre, San Diego Co.			Shaw'80	1974	1601075	offshore	placed south of pipeline as nourishment		
San Onofre State Beach	Oceanside	San Onofre, San Diego County			TC'91	1974	1,605,000				
San Onofre State Beach	Oceanside	San Onofre, San Diego County			TC'91	1977	220,000				upland excavation fill
San Onofre State Beach	Oceanside	San Onofre, San Diego Co.			Shaw'80	1977	219576	offshore	placed south of pipeline as nourishment		
San Onofre State Beach	Oceanside	San Onofre, San Diego County			TC'91	1978	46,000				upland excavation fill
San Onofre State Beach	Oceanside	San Onofre, San Diego Co.			Shaw'80	1978	45745	offshore	placed south of pipeline as nourishment		
San Onofre State Beach	Oceanside	San Onofre, San Diego County			RW'94	1977-1980	270,000	offshore	placed SE of SONGS to nourish beach		
San Onofre State Beach	Oceanside	San Onofre, San Diego County			TC'91	1984	-				"laydown pad released"
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1944	1,530,667			contained cobbles	navigation byproduct
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1958	799884	Del Mar Boat Basin and Oceanside Harbor	disposed 6th to 9th St.	lost immediately; migrated North	
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1960	41824	Del Mar Boat Basin and Oceanside Harbor	disposed 6th to 9th St.	eroded	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1960	17,500				navigation byproduct
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1960	23,700				navigation byproduct

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Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also	
		\$600,000			source: CA-DNOD 1976				
		\$600,000 (4 groins and fill)			source: USACOE-LA 1986 (report); CA Dept of Nav and Ocean Dev 1976; Spencer 1985				
USACOE		Stage 4b & 5, Public Law 87-874 1962			source: USACOE-LA 1995 (Surfside-Sunset/ Newport)				
USACOE		Stage 4b & 5			source: USACOE-LA 1999 CCSTWS Chapter 4 draft				
		\$1,100,000			source: CA-DNOD 1976				
USACOE	beach is stable				source: USACOE-LA 1986 (oral and report) source: USACOE-LA 1995 (Surfside-Sunset/ Newport)				
USACOE		proposed Stage 10, Public Law 87-874 1962							
USACOE		Stage 10			source: USACOE-LA 1999 CCSTWS Chapter 4 draft				
USACOE					source: USACOE-LA 1993 "Existing State of the Orange Co. Coast"				
					source: USACOE-LA 1987(Oceanside); Shaw 1980 replenished as byproduct of upland excavation operations				
		\$247,000			source: CA Dept of Nav and Ocean Dev 1976				
		\$247,000 (groin and fill)			source: Price, R.C., 1966, Statement of the CA Dept. of Water Resources. Shore and Beach, 34(1):22-32. source: USACOE-LA 1978 (Doheny); CA Dept of Nav and Ocean Dev 1976; Shaw 1980				
					source: Price, R.C., 1966, Statement of the CA Dept. of Water Resources. Shore and Beach, 34(1):22-32.				
		\$713,000			source: CA Dept of Nav and Ocean Dev 1976				
	12/66 and 1/67: groin failed--stream runoff	\$713,000			source: USACOE-LA 1978 (Doheny), 1986 (report); CA Dept of Nav and Ocean Dev 1976; Shaw 1980				
					source: USACOE-LA 1987 (Oceanside)				
					source: USA/CESPL and CA/DNOD 1978 inspection tour report source: USACOE-LA 1987 (Oceanside); Shaw 1980 source: USACOE-LA 1987 (Oceanside)				
County of Orange			no disposal during grunion spawning; kelp beds and reefs in Doheny Marine Life Refuge	monitoring plan; turbidity must remain less than 20% above natural non-storm conditions (0-50 NTUs) and dissolved O ₂ can't drop below 5.0 mg/l	15' depth, 1000' long	5-97-232	FC CC-138-97		
			substantial sand "hump" migrated downcoast, preceded by erosional wave larger in magnitude than hump itself	by Scripps; Grove et al. 1987					
					source: Flick and Wanetick, 1989, SIO Ref. No. 89-20, 51 pp. source: USACOE-LA 1987 (Oceanside)				
					source: USACOE-LA 1987 (Oceanside) source: USACOE-LA 1987 (Oceanside)				
					source: USACOE-LA 1987 (Oceanside) source: USACOE-LA 1987 (Oceanside)				
					source: USACOE-LA 1987 (Oceanside)				
					source: Flick and Wanetick, 1989, SIO Ref. No. 89-20, 51 pp.				
	"held them for a year or two"		"1987: Sand hump migrated ~2m/day. Extremely rapid decay of volume (decreased to 1/2 every 200 days). Migrating hump preceded by erosion wave (8 km long in >2 years)..."		source: USACOE-LA 1987 (Oceanside); Grove et al. 1987 source: USACOE-LA 1986 (oral); 1987 (Oceanside)				
	eroded				source: USACOE-LA 1987 (Oceanside); Shaw 1980				
	eroded				source: USACOE-LA 1987 (Oceanside)				

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Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1961	482283	Del Mar Boat Basin and Oceanside Harbor	disposed 6th to 9th St.	eroded 2.5 - 6.5 m/yr in width	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1961	222,350				navigation byproduct
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1961	265,333				navigation byproduct
Oceanside Harbor	Oceanside	Oceanside, San Diego County			RF '93	1961	3,921,000	placed on area beaches			DR
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1963	3809905	Del Mar Boat Basin and Oceanside Harbor	9th St.	eroded immediately	contained cobbles
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1963	265,333			cobbles	beach erosion control/ harbor construction
Oceanside City Beach	Oceanside	Oceanside, San Diego County			SPCA'76	1963					groin and replenishment
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1965	111095	Del Mar Boat Basin and Oceanside Harbor	disposed 9th to 3rd St.	eroded	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1965	110,000	Oceanside Harbor			
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1966	683561	Del Mar Boat Basin and Oceanside Harbor	disposed 3rd to Minn. Ave	eroded	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1966	690,000	Oceanside Harbor			
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1966	690,000				harbor bypassing
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1967	177752	Del Mar Boat Basin and Oceanside Harbor	disposed 3rd to Tyson St.	eroded	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1967	180,000	Oceanside Harbor			
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1967	177,900				harbor bypassing
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1968	433924	Del Mar Boat Basin and Oceanside Harbor	disposed San Luis Rey to Wisconsin Ave	eroded	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1968	430,000	Oceanside Harbor			
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1968	433,900				harbor bypassing
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1969	352890	Del Mar Boat Basin and Oceanside Harbor	disposed San Luis Rey to 3rd St	eroded	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1969	350,000	Oceanside Harbor			
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1969	353,000				harbor bypassing
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1971	551554	Del Mar Boat Basin and Oceanside Harbor	disposed 3rd St. to Wisconsin Ave	eroded	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1971	550,000	Oceanside Harbor			
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1971	551,750				harbor bypassing
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1973	433924	Del Mar Boat Basin and Oceanside Harbor	disposed Tyson to Hay St	eroded	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1973	440,000	Oceanside Harbor			
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1975	559396	Del Mar Boat Basin and Oceanside Harbor	disposed Pine to Witherby St.	eroded	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1975	560,000	Oceanside Harbor			
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1975	559,750				harbor bypassing
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1976	550247	Del Mar Boat Basin and Oceanside Harbor	disposed Ash to Witherby St.	eroded	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1976	550,000	Oceanside Harbor			
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1976	550,000				harbor bypassing
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1977	320,000	Oceanside Harbor			
Oceanside City Beach	Oceanside	Oceanside, San Diego Co.			Shaw'80	1978	318908	Del Mar Boat Basin and Oceanside Harbor	disposed Ash to Witherby St.	eroded	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1978	318,550		February	cobbles	harbor bypassing
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1981	460,000	Oceanside Harbor			
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1981	400,000	nearshore off Oceanside	placed SE from Harbor on beach		
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1981	463,000		1.5 miles long	not coarse enough	harbor bypassing
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1982	920,000				harbor bypassing/ beach erosion control
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RF '93	1982	1,300,000	San Luis Rey River bed	trucked		R
Oceanside City Beach	Oceanside	Oceanside, San Diego County			CE'99	1986	450,000	Oceanside harbor	placed on beach near Tyson St.		DR, DS
Oceanside City Beach	Oceanside	Oceanside, San Diego County			ACOE'90	1986	350,000	Oceanside harbor	beach fill		DR, DS
Oceanside City Beach	Oceanside	Oceanside, San Diego County			ACOE'90	1988	257,000	Oceanside harbor	beach fill		DR, DS
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'89	1944 (frequently since)		harbor excavation, harbor bypassing			R
Oceanside City Beach	Oceanside	Oceanside, San Diego County			TC'91	1951-58	700,000				nav. byproduct/ beach erosion control
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1962-1963	3,800,000	Oceanside Harbor excavation			
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1965-1981	~5,000,000			sand and riverine cobbles	
Oceanside City Beach	Oceanside	Oceanside, San Diego County			FC	1981 (12 mos)	800,000	San Luis Rey River (Whelan Lake to Murray Rd) (San Luis Rey Flood Control Project)	transported via surface roads, placed using bulldozers, graded, above and below MLLW datum	medium grain size (95% on 200 sieve)	R
Oceanside City Beach	Oceanside	Oceanside, San Diego County			RW'94	1981-1982	923,000	San Luis Rey riverbed	trucked from site 7 miles from coast		
Oceanside City Beach	Oceanside	Oceanside, San Diego County			FC	1983 August to November	450,000	Camp Pendleton/Oceanside Harbor	hydraulic pipeline dredge, pump, discharged in surf zone (Municipal Pier to Forster St.)	silty sand	R, DS, DR

TABLE2TASK3CSMW.xls

Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also	
	eroded				source: USACOE-LA 1987 (Oceanside); Shaw 1980				
	eroded 8-22 ft/yr				source: Shaw 1980				
	all fill lost by 1968				source: USACOE-CERC 1984; Moffat and Nichol 1983; Shaw 1980				
		\$1,785,000			source: CA-DNOD 1976				
					source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4				
					source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4				
	eroded				source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4 source: USACOE-LA 1987 (Oceanside); Shaw 1980				
					source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4				
	eroded				source: USACOE-LA 1987 (Oceanside); Shaw 1980				
					source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4				
	eroded				source: USACOE-LA 1987 (Oceanside); Shaw 1980				
					source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4				
	eroded				source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4 source: USACOE-LA 1987 (Oceanside); Shaw 1980				
					source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4				
	eroded				source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4 source: USACOE-LA 1987 (Oceanside); Shaw 1980				
					source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4				
	eroded				source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4 source: USACOE-LA 1987 (Oceanside); Shaw 1980				
					source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4				
	eroded				source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4 source: USACOE-LA 1987 (Oceanside); Shaw 1980				
					source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4				
	eroded				source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4 source: USACOE-LA 1987 (Oceanside); Shaw 1980				
					source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4				
	eroded 2/78				source: USACOE-LA 1987 (Oceanside) (Coastal Cliff Sediments) source: USA/CESPL, 1987, Oceanside Littoral Cell Preliminary Sediment Budget Report, prepared by Tekmarine, inc, CCSTWS87-4 source: Ryan, Joe, personal communications with Weigel source: USACOE-LA 1987 (Oceanside)				
	one season (expected 2-3 seasons)	\$4,000,000	bypassing inadequate		source: USACOE-LA 1987 (Oceanside); Spencer 1987; USACOE-CERC 1984; Moffat and Nichol Engineers 1983				
					source: Coastal Environments 1999 Agua Hedionda Lagoon study				
USACOE		lowest cost disp. Alt.							
USACOE		lowest cost disp. Alt.							
					"Each time the fill has eroded, often quite rapidly."				
	total loss +300,000 add'l by 12/59		fill migrated upcoast into nav. Channel		source: USACOE-LA 1960; Shaw 1980				
					source: USACOE-LA 1987 (Oceanside); Shaw 1980				
USACOE		Congressional authorization for <\$3,000,000		none		CD-006-81			
			dredging: elimination of benthic organisms. DR and N: turbidity; timed after nesting season		source: Bagley and Whitson, Shore and Beach 1982				
USACOE					3 prior coastal permits for same activity	CD-020-83		CD-6-81; Appeal #218-80	

TABLE2TASK3CSMW.xls

Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Oceanside City Beach	Oceanside	Oceanside, San Diego County			FC	1984-1989	400,000	sediment bypasses Oceanside Harbor-one beach site and two harbor sites	jet-pumped sand bypassing with underwater slurry pipeline	sand and silt, clean and dirty, light and dark	R, DR
Oceanside City Beach	Oceanside	Oceanside, San Diego County			FC	3/15/90 - 7/30/90; 9/15/92 - 3/15/93; 9/15/94 - 3/15/95; 9/15/96 - 3/15/97	500,000	Oceanside Harbor entrance and navigation channels and sand trap	hydraulic dredge, buried/exposed pipeline (S of Oceanside Public Pier and S of Tyler St.)		DS, DR
Oceanside City Beach	Oceanside	Oceanside, San Diego County			FC	9/15/94 - 3/15/95	400,000	Oceanside Harbor (entrance, navigation channels, sand trap)	hydraulic or hopper dredge (south of Oceanside Pier) (beach or nearshore disposal)		R, DS, DR
Oceanside City Beach	Oceanside	Oceanside, San Diego County			FC	as of 1-11-98	102,000	San Diego Bay main channel (dredge area 1)		sand with munitions	DR, DS, R
Oceanside City Beach	Oceanside	Oceanside, San Diego County				Mar-00		Oceanside Harbor			
Oceanside City Beach*	Oceanside	Oceanside, San Diego County				8/24/01 - 9/23/01	421,000	Offshore	Trailing suction hopper dredge	Median grain size of fill = 0.62 mm	N
North Carlsbad	Oceanside	Carlsbad, San Diego County				7/6/01 - 8/2/01	225,000	Offshore	Trailing suction hopper dredge	Median grain size of fill = 0.14-0.62 mm	N
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1954	4,080,000		1.0 mile long, widened beach 396 ft		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1955	111,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1957	232,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1960	371,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1961	225,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1963	308,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1965	223,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1967	160,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1969	97,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1972	200,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1974	341,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1976	392,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1954	3999420	Agua Hedionda Lagoon	placed from 1060 m upcoast of mouth to 600 m S of outlet;		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1955	111095	Agua Hedionda Lagoon	widened beach avg. 30m (x ft)		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1957	231339	Agua Hedionda Lagoon	placed to south of Lagoon outlet		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1960	369881	Agua Hedionda Lagoon	placed to south of Lagoon outlet		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1961	224804	Agua Hedionda Lagoon	placed to south of Lagoon outlet		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1963	307145	Agua Hedionda Lagoon	placed to south of Lagoon outlet		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1965	222190	Agua Hedionda Lagoon	placed to south of Lagoon outlet		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1967	159454	Agua Hedionda Lagoon	placed to south of Lagoon outlet		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1969	96718	Agua Hedionda Lagoon	placed to south of Lagoon outlet		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1972	199971	Agua Hedionda Lagoon	placed to N and S of lagoon outlet		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1974	339820	Agua Hedionda Lagoon	placed to N and S of lagoon outlet		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1976	390793	Agua Hedionda Lagoon	placed to N and S of lagoon outlet		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego Co.			Shaw'80	1979	418240	Agua Hedionda Lagoon	placed to N and S of lagoon outlet		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1979	419,000				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'91	1979	430,667				
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			TC'89	frequently since 1944		Agua Hedionda Lagoon			R
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1954	~4,000,000	Agua Hedionda Lagoon	excavated for San Diego G&E Co. plant; placed from 3500 ft N of lagoon entrance jetties to 2000 ft S of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1955	110,000	Agua Hedionda Lagoon	pumped as slurry into surf zone; placed downdrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1957	230,000	Agua Hedionda Lagoon	pumped as slurry into surf zone; placed downdrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1960	370,000	Agua Hedionda Lagoon	pumped as slurry into surf zone; placed downdrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1961	225,000	Agua Hedionda Lagoon	pumped as slurry into surf zone; placed downdrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1963	307,000	Agua Hedionda Lagoon	pumped as slurry into surf zone; placed downdrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1965	222,000	Agua Hedionda Lagoon	pumped as slurry into surf zone; placed downdrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1967	159,000	Agua Hedionda Lagoon	pumped as slurry into surf zone; placed downdrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1969	97,000	Agua Hedionda Lagoon	pumped as slurry into surf zone; placed downdrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1972	200,000	Agua Hedionda Lagoon	pumped as slurry; placed downdrift and updrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1974	340,000	Agua Hedionda Lagoon	pumped as slurry; placed downdrift and updrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1976	391,000	Agua Hedionda Lagoon	pumped as slurry; placed downdrift and updrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1979	418,000	Agua Hedionda Lagoon	pumped as slurry; placed downdrift and updrift of discharge jetties		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1981	235,000	Agua Hedionda Lagoon	pumped as slurry		

TABLE2TASK3CSMW.xls

Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1983	222,000	Aqua Hedionda Lagoon	pumped as slurry		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1985	404,000	Aqua Hedionda Lagoon	pumped as slurry		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1988	347,000	Aqua Hedionda Lagoon	pumped as slurry into surf zone S of discharge jetties; also pumped behind dikes along beach		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1991	489,000	Aqua Hedionda Lagoon			
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1992	126,000	Aqua Hedionda Lagoon			
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			RW'94	1993	115,000	Aqua Hedionda Lagoon			
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			CE'99	Apr-91	459,000	Aqua Hedionda Lagoon	placed on Middle and South Beaches		DR, DS
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			CE'99	Feb.-Apr. 1991	115,395	Aqua Hedionda Lagoon	placed on Middle beach (600-900 yd length)		DR, DS
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			CE'99	Feb.-Apr. 1988	347,782	Aqua Hedionda Lagoon?	placed on North, Middle and South Beaches		DR, DS
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			CE'99	Apr-92	125,976	Aqua Hedionda Lagoon?	placed on North Beach		DR, DS
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			CE'99	1994	158,996	Aqua Hedionda Lagoon?	placed on North, Middle and South Beaches		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			CE'99	1996	443,130	Aqua Hedionda Lagoon?	placed on North, Middle and South Beaches		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			CE'99	1997	197,342	Aqua Hedionda Lagoon?	placed on Middle Beach		
Carlsbad State Beach Park	Oceanside	Carlsbad, San Diego County			CE'99	1998	273,581	Aqua Hedionda Lagoon?	placed on Middle and South Beaches		
Aqua Hedionda Lagoon	Oceanside	Carlsbad, San Diego County			RF '93	1954	3,921,000	placed on area beaches			DR
South Carlsbad	Oceanside	Carlsbad, San Diego County				6/25/01 - 7/6/01	158,000	Offshore	Trailing suction hopper dredge	Median grain size of fill = 0.62 mm	N
Batiquitos	Oceanside	Leucadia, San Diego County				8/16/01 - 8/23/01	117,000	Offshore	Trailing suction hopper dredge	Median grain size of fill = 0.62 mm	N
Leucadia	Oceanside	Leucadia, San Diego County				6/4/01 - 6/15/01	132,000	Offshore	Trailing suction hopper dredge	Median grain size of fill = 0.62 mm	N
Moonlight Beach	Oceanside	Encinitas, San Diego County				8/10/01 - 8/16/01	105,000	Offshore	Trailing suction hopper dredge	Median grain size of fill = 0.34-0.62 mm	N
Cardiff	Oceanside	Cardiff-by-the-Sea, San Diego County				8/2/01 - 8/10/01	101,000	Offshore	Trailing suction hopper dredge	Median grain size of fill = 0.34 mm	N
Fletcher Cove	Oceanside	Solana Beach, San Diego County				6/15/01 - 6/24/01	146,000	Offshore	Trailing suction hopper dredge	Median grain size of fill = 0.14 mm	N
Del Mar	Oceanside	San Diego Co.			FC	as of 1-11-98	170,000	San Diego Bay main channel (dredge area 1)		sand with munitions	DR, DS, R
Del Mar	Oceanside	Del Mar, San Diego County				4/27/01 - 5/10/01	183,000	Offshore	Trailing suction hopper dredge	Median grain size of fill = 0.14 mm	N
Torrey Pines	Oceanside	Del Mar, San Diego County				4/6/01 - 4/27/01	245,000	Offshore	Trailing suction hopper dredge	Median grain size of fill = 0.14 mm	N
Pacific Beach	Mission Bay	Pacific Beach, San Diego Co.			TC'91	1948	613,333		beach widened 300 ft max		beach restoration
Pacific Beach	Mission Bay	Pacific Beach, San Diego Co.			RW'94	1948	~600,000	Mission Bay	placed North of North Jetty		
Pacific Beach	Mission Bay	Pacific Beach, San Diego Co.			Shaw'80	1948	601,220	Mission Bay	widened beach max. 91 m (x ft)	migrated south; lost by 1957	
Pacific Beach	Mission Bay	Pacific Beach, San Diego Co.			TC'91	1973	306,667				
Pacific Beach	Mission Bay	Pacific Beach, San Diego Co.			RW'94	1973	300,000	Mission Bay entrance			
Pacific Beach	Mission Bay	Pacific Beach, San Diego Co.			Shaw'80	1973	300,610	Mission Bay		migrated south	
Mission Beach	Mission Bay	Mission Beach, San Diego Co.			TC'91	1948	~600,000	Mission Bay	beach widened ~300 ft		DR, R
Mission Beach	Mission Bay	Mission Beach, San Diego Co.			RW'94	1958	150,000	Mission Bay			DR, R
Mission Beach	Mission Bay	Mission Beach, San Diego Co.			FC	October '83 to January '84	490,000	Mission Bay Harbor	cutter-head hydraulic suction or hopper dredge, discharged onto beachface from 16-26" surface pipeline (from N Jetty to Crystal Pier)	fine sand and silty sand	R, DS, DR
Mission Beach	Mission Bay	Mission Beach, San Diego Co.			RW'94	1984	246,000	Mission Bay entrance	placed N of jetties		R, DS, DR
Mission Beach	Mission Bay	Mission Beach, San Diego Co.			FC	as of 1-11-98	12,000	San Diego Bay main channel (dredge area 1)	(nearshore)	sand with munitions	DR, DS, R
Mission Beach	Mission Bay	Mission Beach, San Diego Co.				5/10/01 - 5/21/01	151,000	Offshore	Trailing suction hopper dredge	Median grain size of fill = 0.52 mm	N
Ocean Beach	Mission Bay	Ocean Beach, San Diego Co.			RW'94	1950	67,000	Mission Bay			DR, DS, R

TABLE2TASK3CSMW.xls

Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also	
					source: Shaw 1980				
					source: Shaw 1980				
					source: Shaw 1981				
					source: Shaw 1982				
					source: Shaw 1983				
					source: Shaw 1984				
	>18 months				source: Coastal Environments 1999 Agua Hedionda Lagoon study				
	<8 months				source: Coastal Environments 1999 Agua Hedionda Lagoon study				
	<6 months				source: Coastal Environments 1999 Agua Hedionda Lagoon study				
	0-6 months				source: Coastal Environments 1999 Agua Hedionda Lagoon study				
					source: Coastal Environments 1999 Agua Hedionda Lagoon study				
					source: Coastal Environments 1999 Agua Hedionda Lagoon study				
					source: Coastal Environments 1999 Agua Hedionda Lagoon study				
SANDAG	Indicator Transect (2003): MSL Shoreline Change =+31' Volume Change = -6 cy/ft			Part of annual Regional Beach Monitoring Program of SANDAG Regional Beach Sand Project.	source: CFC, 2004				
SANDAG	Indicator Transect (2003): MSL Shoreline Change =+55' Volume Change = -5 cy/ft			Part of annual Regional Beach Monitoring Program of SANDAG Regional Beach Sand Project.	source: CFC, 2004				
SANDAG	Indicator Transect (2003): MSL Shoreline Change =+28' Volume Change = +26 cy/ft			Part of annual Regional Beach Monitoring Program of SANDAG Regional Beach Sand Project.	source: CFC, 2004				
SANDAG	Indicator Transect (2003): MSL Shoreline Change =+103' Volume Change = -27 cy/ft			Part of annual Regional Beach Monitoring Program of SANDAG Regional Beach Sand Project.	source: CFC, 2004				
SANDAG	Indicator Transect (2003): MSL Shoreline Change =+97' Volume Change = +54 cy/ft			Part of annual Regional Beach Monitoring Program of SANDAG Regional Beach Sand Project.	source: CFC, 2004				
SANDAG	Indicator Transect (2003): MSL Shoreline Change =+48' Volume Change = +10 cy/ft			Part of annual Regional Beach Monitoring Program of SANDAG Regional Beach Sand Project.	source: CFC, 2004				
USN		Congressional authorization				CD-009-98		CD-95-95; CD-140-97; CD-161-97	
SANDAG	Indicator Transect (2003): MSL Shoreline Change =+96' Volume Change = +11 cy/ft			Part of annual Regional Beach Monitoring Program of SANDAG Regional Beach Sand Project.	source: CFC, 2004				
SANDAG	Indicator Transect (2003): MSL Shoreline Change =+73' Volume Change = +17 cy/ft			Part of annual Regional Beach Monitoring Program of SANDAG Regional Beach Sand Project.	source: CFC, 2004				
	by '57, returned to '40 width				source: Shaw 1980				
	fill moved south				source: Shaw 1980				
USACOE	returned to '40 position by 1960		sand migrated south to Mission beach						
USACOE			beachfill transported S; by 1958 shoreline had returned to 1948 position; shoreline retreated 200 ft. in reach S of Crystal Pier		source: USACOE-LAD 1960, 1964, 1987 (Cliff Sediments) source: USACOE-LAD 1964				
USACOE			"Turbidity during dredging and disposal operations will reduce dissolved oxygen concentration in the water column and may temporarily clog respiratory and feeding mechanisms of fish and benthic animals."		suspended sediment levels w/ discharge flow regulated through use of weir system	CD-032-83			
USACOE	moved N after placement near amusement park				source: Castens, Corps of Eng. Records, per. Comm. (see CCSTWS 87-10)				
USN		Congressional authorization				CD-009-98		CD-95-95; CD-140-97; CD-161-97	
SANDAG	Indicator Transect (2003): MSL Shoreline Change =+91' Volume Change = +41 cy/ft			Part of annual Regional Beach Monitoring Program of SANDAG Regional Beach Sand Project.	source: CFC, 2004				
USACOE				migrated N, filled in mouth of San Diego River	source: Walker and Brodeur, 1993; USACE-LAD, 1970				

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Site	Cell	City/County	Latitude	Longitude	Database	Date of project	Dredge/Fill Volume (yd ³)	Fill Source/Site	Dredge/Transport Method	Dredge/Fill Characteristics	Activity
Ocean Beach	Mission Bay	Ocean Beach, San Diego Co.			Shaw'80	1950	66,657	Mission Bay	Newport Ave. to Saratoga Ave.; widened beach max. 45 m (x ft)	migrated north; lost in 6 months	
Ocean Beach	Mission Bay	Ocean Beach, San Diego Co.			SPCA'76	1955					groin and fill
Ocean Beach	Mission Bay	Ocean Beach, San Diego Co.			RW'94	1955	275,000	Mission Bay entrance	1700 ft long beach		
Ocean Beach	Mission Bay	Ocean Beach, San Diego Co.			Shaw'80	1955	274,470	Mission Bay	Niagara Ave. to Cape May Ave.; widened beach max. 109 m (x ft)	some migrated north; remainder stable	
Ocean Beach	Mission Bay	Ocean Beach, San Diego Co.			87-10	1959	275,000		contained at N end by groin		
Ocean Beach	Mission Bay	Ocean Beach, San Diego Co.			RW'94	1984	30,000	Mission Bay entrance	placed S of groin		
Ocean Beach	Mission Bay	Ocean Beach, San Diego Co.			FC	October '83 to January '84	50,000	Mission Bay Harbor	cutter-head hydraulic suction or hopper dredge, discharged onto beachface from 16-26" surface pipeline (from S Jetty to S Groin)	fine sand and silty sand	R, DS, DR
North Island Oceanside Beach	Silver Strand	Coronado, San Diego County			RW'94	1941	2,200,000	San Diego Bay			
North Island Oceanside Beach	Silver Strand	Imperial Beach, San Diego Co.			Shaw'80	1940-1941	2248040	San Diego Harbor	temporarily widened beach max. 272 m (x ft)		
Coronado City Beach	Silver Strand	Coronado, San Diego County			FC	July-December '85	1,100,000	offshore borrow site ~1500' offshore, 1 mi. downcoast of Amphibious base, 20-40' below MLLW	cutterhead hydraulic dredge, pumped through submerged pipeline to beach	sand	R, DR
Coronado Shores Beach	Silver Strand	Imperial Beach, San Diego Co.			Shaw'80	1946	26009300	San Diego Harbor	widened beach max. 333 m (x ft)	retreated back 152 m (199 ft) by 1958	
Gator Beach	Silver Strand	Coronado, San Diego County			RW'94	1977	1,100,000	San Diego Bay			
Gator Beach	Silver Strand	Coronado, San Diego County			RW'94	1985	1,100,000	San Diego Bay			
Gator Beach	Silver Strand	Coronado, San Diego County			FC	September 1986 to March 15, 1987	294,000	San Diego Bay, main channel, including Naval station piers	hopper dredge for main channel dredging (source of nourishment sediment), clamshell dredge for pier dredging; submerged and floating pipeline transport to pre-existing pipeline under Silver Strand Peninsula		N, R, DS, DR
Silver Strand State Beach Park	Silver Strand	Imperial Beach, San Diego Co.			TC'89	b/w 1936 and 1946	40,000,000	San Diego Bay	dredging of Bay		R
Silver Strand State Beach Park	Silver Strand	Imperial Beach, San Diego Co.			TC'91	1940-41	2,260,000		1.0 mi long; "temporary maximum shoreline advance of 898 ft"		navigation byproduct/ recreational beach
Silver Strand State Beach Park	Silver Strand	Imperial Beach, San Diego Co.			TC'91	1941-46	26,200,000		2.0 mi long; advanced shoreline seaward >985 ft		navigation byproduct
Silver Strand State Beach Park	Silver Strand	Imperial Beach, San Diego Co.			TC'91	1936	14,000,000				navigation byproduct
Silver Strand State Beach Park	Silver Strand	Imperial Beach, San Diego Co.			TC'91	1944					
Silver Strand State Beach Park	Silver Strand	Coronado, San Diego County			RW'94	1946	26,000,000	San Diego Bay	2 mile long beach		
Silver Strand State Beach Park	Silver Strand	Coronado, San Diego County			RW'94	1967	40,000	San Diego Bay			
Silver Strand State Beach Park	Silver Strand	Imperial Beach, San Diego Co.			TC'91	1967	40,000				
Silver Strand State Beach Park	Silver Strand	Imperial Beach, San Diego Co.			Shaw'80	1967	41,824	San Diego Harbor		net migration to North	
Silver Strand State Beach Park	Silver Strand	Imperial Beach, San Diego Co.			Shaw'80	1976	3,467,471	San Diego Harbor		net migration to North	
Silver Strand State Beach Park	Silver Strand	Coronado, San Diego County			RW'94	1976	1,000,000	San Diego Bay			
Silver Strand State Beach Park	Silver Strand	Imperial Beach, San Diego Co.			TC'91	1976	3,500,000		2.0 mi long		
Silver Strand State Beach Park	Silver Strand	Imperial Beach, San Diego Co.			TC'91	1985	1,100,000		0.7 mi long		
Silver Strand State Beach Park	Silver Strand	Coronado, San Diego County			RW'94	1988	148,000	San Diego bay outer entrance Channel	placed in nearshore as submerged mound, 1200 ft. long, 600 ft. wide, ~7 ft high	fill median = 0.20 mm; native median = 0.25 mm	
Silver Strand State Beach Park	Silver Strand	Imperial Beach, San Diego Co.			TC'91	1988	~1,000,000		"placed offshore in 25 ft water depth"		navigation byproduct
Silver Strand State Beach (nearshore disposal)	Silver Strand	Imperial Beach, San Diego Co.			DRP-1-01	1988-1989	190,000	San Diego bay outer entrance Channel	split-hull dredge disposal in nearshore; 1200 ft long, 600 ft wide from 800 to 1400 ft offshore (-10 to -30' MLLW)	med. 0.18 mm, <12% at No. 200 sieve	DR, DS
Silver Strand State Beach (nearshore disposal)	Silver Strand	Imperial Beach, San Diego Co.			FC	Feb-96	400,000	San Diego Bay (entrance and navigation channels)	Hopper dredge "Essayons"; nearshore disposal	92.4% sand or larger particles; low in total organic carbon	R, DS, DR
Silver Strand State Beach (nearshore disposal)	Silver Strand	Imperial Beach, San Diego Co.			FC	1987	450,000		ESSAYONS hopper dredge, then deposition in -35 to -40 MLLW offshore of Silver Strand Beach		R, DS, DR
Delta Beach (north side, ocean)	Silver Strand	Coronado, San Diego County			FC	1995	-60,000	disposal on bay side of Delta Beach	transport via truck		DR
Delta Beach (south side, bay)	Silver Strand	Coronado, San Diego County			FC	1995	60,000	ocean side of Delta beach	transport via truck		N
Imperial Beach	Silver Strand	Imperial Beach, San Diego Co.			RW'94	1977	1,100,000				
Imperial Beach	Silver Strand	Imperial Beach, San Diego Co.			TC'91	1977	1,100,000		1.0 mi long; ~150 ft wide		
Imperial Beach	Silver Strand	Imperial Beach, San Diego Co.			Shaw'80	1977	999855	San Diego Harbor		net migration to North	
Imperial Beach	Silver Strand	Imperial Beach, San Diego Co.			TC'91	1979	1,000,000			fill contained foreign matter	
Imperial Beach	Silver Strand	Imperial Beach, San Diego Co.			TC'89	1977, 1979	2,100,000				R
Imperial Beach	Silver Strand	Imperial Beach, San Diego Co.			FC	late 1984?	7,300	Tijuana slough and estuary	dragline and bulldozer dredging; placement on beach above MHW, leveling to grade	storm-deposited sands; no mud	DR
Imperial Beach	Silver Strand	Imperial Beach, San Diego Co.			FC	1994	51,000	Ballast Point, Point Loma Peninsula, San Diego	nearshore disposal	97% sand	R, DS, DR
Imperial Beach	Silver Strand	Imperial Beach, San Diego Co.			FC	1994	240,000	San Diego Bay, Naval Station, Pier 2	disposal in nearshore (>10' MLLW)	predominantly sandy	R, DS, DR
Imperial Beach	Silver Strand	Imperial Beach, San Diego Co.			RW'94	1994	<240,000	San Diego Bay, Naval Station, Pier 3		sandy portion of dredge spoils	R

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Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also		
		\$161,000			source: CA-DNOD 1976					
USACOE					source: USACE-LAD 1970					
USACOE			"Turbidity during dredging and disposal operations will reduce dissolved oxygen concentration in the water column and may temporarily clog respiratory and feeding mechanisms of fish and benthic animals."		suspended sediment levels w/ discharge flow regulated through use of weir system source: Shaw 1980; Walker and Brodeur, 1993	CD-032-83				
USACOE			scheduled to avoid grunion spawning and least tern nesting	post-construction monitoring at borrow site for recolonization and sand movement into pit	receiver beach is ~3300' long;	CD-003-85				
					source: Shaw 1980; Walker and Brodeur, 1993					
					source: Shaw 1980; Walker and Brodeur, 1993					
USACOE			scheduled around least tern nesting		Gator Beach selected b/c: 1) extant underground pipeline; 2) extant nourishment project in the area; 3) eroding condition 4) extant archeological and biological surveys BUT Gator Beach off-limits to public for military reasons	CD-033-85				
	eventually migrated N				source: Moffat and Nichol, Engineers 1987; Shaw 1980					
		\$1,260,000	"After 1960, shoreline behaved approximately as it had before 1933. Indicates the beachfill-forced shoreline adjusted to a dynamic equilibrium platform b/w 1954 and 1960."		source: Moffat and Nichol, Engineers 1987; Shaw 1980; Inman 1976; Converse 1982 source: USACOE-LA 1986 (oral) source: Inman 1976 source: Shaw 1980; Walker and Brodeur, 1993 source: Shaw 1980; Walker and Brodeur, 1993					
			"Net migration to N. Ultimately impounded by Zuniga Jetty or swept offshore to depths of 495-990 ft by ebb currents."		source: Moffat and Nichol, Engineers 1987; Shaw 1980					
					source: Shaw 1980; Walker and Brodeur, 1993					
			"1987: Since 1978, the beach has eroded and the buildings constructed on the 1941-1976 fill can be completely surrounded by the sea during even small storm events."		source: Moffat and Nichol, Engineers 1987 source: Moffat and Nichol, Engineers 1987					
	sand moved shoreward									
			"Since 1941, most of the fill has remained in the system. Appears 20-30% moved offshore because too fine to remain in dynamic equilibrium on shoreface. Somewhat <40% of the beachfill that was reworked was lost offshore."		source: Moffat and Nichol, Engineers 1987; Surfriider Foundation, 1987/88					
USACOE	migrated on and downshore				source: DRP-1-01, August 1990, "Construction and Monitoring of Nearshore Placement of Dredged Material at Silver Strand State..."					
USACOE						CD-071-95		CD-53-87; CD-3-87; CD-91-93		
USACOE			increased turbidity, loss of O2, loss of benthics, impacts to least tern, grunion, kelp; dredging activity modified to prevent turbidity in upper 1/3 of H2O column			CD-053-87				
USN						CD-128-95				
USN			to protect nesting tern colonies		to improve least tern nesting habitat; loss of sand from ocean-side littoral system to be offshet by homeporting dredge spoils	CD-128-95				
	50% lost by 6/1978				source: Van Deerlin 1978; Shaw 1980; USACOE-LA 1983; Moffat and Nichol 1987					
			"demonstrated winnowing will clean sand." 1986: "Groins have not worked very well because of fine nature of sand." migrated to N		source: USACOE-CERC 1984; Converse 1982; USACOE-LA 1986 (oral) sources: Shaw 1980, Converse 1982, USACOE 1984, 1986					
USFWS			work scheduled to avoid impacts to: light-footed clapper rails, CA least terns, Western snowy plovers; sited to avoid impacts to salt-marsh birds-beak			CD-041-84				
US Coast Guard			kelp beds avoided during disposal; pre-disposal survey w/ NMFS and demarcation of kelp area; nearshore disposal minimizes impacts to grunions			CD-026-94		CD-91-93		
USN			kelp beds	kelp bed monitoring		CD-091-93				

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Applicant/Sponsor	Duration of Fill/Performance	Funding	Environmental Effects	Monitoring	Notes	Ref. ID	Permit/FC Ref.	See Also	
SANDAG	Indicator Transect (2003): MSL Shoreline Change = +137' Volume Change = +52 cy/ft			Part of annual Regional Beach Monitoring Program of SANDAG Regional Beach Sand Project.	source: CFC, 2004				
CA Coastal Conservancy			disposal during rainy season, during outgoing tides to simulate natural high turbidity situations			CC-054-96			
						R=REPLENISHMENT			
						DS=DISPOSAL			
						N=NOURISHMENT			
						DR=DREDGING			
						B=BYPASSING			
						M=MAINTENANCE			
						TC=TonyaClayton			
						SPCA=ShoreProtectionInCalifornia-DNOD1976			
						RF=RonFlick-S&B'93			
						RW=RobertWeigel-S&B'94			
						CE=Coastal Environments 1999 Agua Hedionda Lagoon Study			
						NRC=National Research Council Beach Nourishment and Protection			
						ACOE=US ACOE 1990 Beach and Nearshore Placement of Material Dredged from Federally authorized navigation projects			
						P.Y'89=Patterson and Young, Coastal Zone '89			
						LHW'94=Leidersdorf, Hollar and Woodell, Shore and Beach 1994			
						Shaw'80=Martha Shaw 1980 Scripps Report			
						LAD95=ACOE LA District Surfside-Sunset/West Newport Beach Nourishment Project, Orange Co., CA; May 1995			
						DS'85=Donald Spencer, The Newport Beach Groin Field, Orange Co CA, in CA's Battered Coast, 1985			
						87-10=US ACOE 1987 CCSTWS 87-10 Shoreline Movement Investigations Report			
						LAD93-1=ACOE LA District CCSTWS Final Report 93-1			
						LAD-BNSS=Beach Nourishment Sediment Sources: Previous Studies and results from vibracoring field program, Orange Co. CA, Final Report, 1993			
						LAD99=ACOE LA District CCSTWS Chapter 4 Draft Report December 1999			