

PLACEMENT SITE PROFILES LIST

IN-BAY

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6. Golden Gate Site (under bridge, north tower?)

OCEAN

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REUSE/NON-TIDAL

- | | |
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PLACEMENT SITE PROFILE

Site No: 1

Site Name:	Alcatraz (SF-11)
Site Category:	In-Bay Existing Disposal Site
Site Area:	Water surface area of 72.1 acres.
Site Location:	Located 0.3 miles south of Alcatraz Island within the City and County of San Francisco. The center of the site is Lat 37-49-17N, Long 12-25-23W.
Site Access:	Open water site accessible only by vessel via San Francisco Bay.
Site Description:	Circular area of 1,000 foot radius. The area has recently been subdivided into 9 distinct areas around portions of the site perimeter to allow a higher level of control over where material is placed within the area. The site has been used for disposal of dredged materials since the late 1800's.
Current Site Land Use:	N/A
Adjoining Land Use(s):	N/A
Site Volume and Capacity:	This is a dispersive dredged material disposal site with a recent history of shoaling problems which created a navigation hazard. A current policy of the Corps of Engineers (Public Notice No. 93-3) limits the volume disposed at the site to 400,000 cubic yards (cy) per month from October to April and to 300,000 cy per month from May to September, for a total annual volume to 4.3 million cy. Only 150,000 cy per month can be clamshell material, the remainder must be hydraulically dredged material. The S.F. Bay Regional Water Quality Control Board's Basin Plan limits disposal to 4.0 million cy per year. The Basin Plan's monthly limits are 1.0 million cy per month from October to April and 0.3 million cy per month from May to September.
Estimated Site Life:	Under the current close regulation, and expected future regulation, the site life should be unlimited.
Physical Site Construction Requirements and Constraints:	N/A
Site References:	LTMS for Dredged Material Disposal in the San Francisco Bay Region Phase I, Dec. 1990, USACOE; San Francisco Bay Disposal Site Monitoring and Management Activities Quarterly Report, Jun.-Aug., 1993; Calif. Quad Map, San Francisco North; NOAA Chart 18649.
Additional Notes:	N/A

PLACEMENT SITE PROFILE

Site No:

Site Name:

Carquinez Straits (SF-9)

Site Category:

In-Bay Existing Disposal Site

Site Area:

Water surface area of 45.9 acres.

Site Location:

Located 0.9 miles west of the entrance to Mare Island Straits in eastern San Pablo Bay in Solano County.

Site Access:

Open water site accessible only by vessel via San Pablo Bay.

Site Description:

The site is a 1,000 foot by 2,000 foot rectangle with the long axis bearing 80 degrees true, centered at Lat 38-03-S 122-15-55W. Water depths in the site range from 15 to 60 feet.

Current Site Land Use:

N/A

Adjoining Land Use(s):

N/A

Site Volume and Capacity:

This is a dispersive dredged material disposal site. A current policy of the Corps of Engineers (Public Notice No. 93- states no specific volume limits for this site. The S.F. Bay Regional Water Quality Control Board's Basin Plan limits Disposal at this site to 3.0 million cubic yards (cy) per year in wet and above normal water years, and to 2.0 million cy year for all other water year classes. The Basin Plan's monthly limit is 1.0 million cy.

Estimated Site Life:

Under the current close regulation, and expected future regulation, the site life should be unlimited.

Physical Site Construction Requirements and Constraints:

N/A

Site References:

LTMS for Dredged Material Disposal in the San Francisco Bay Region Phase I, Dec., 1990, USACOE; San Francisco Bay Disposal Site Monitoring and Management Activities Quarterly Report, Jun.-Aug., 1993; Dredging and Disposal Road Map, Aug 1993, SFBCDC and USACE; Calif. Quad Map, Mare Island; NOAA Chart 18654.

Additional Notes:

This site is normally used for fine grained material only (silts and muds).

PLACEMENT SITE PROFILE

Site No: **3**

Site Name: San Pablo Bay (SF-10)

Site Category: In-Bay Existing Disposal Site

Site Area: Water surface area of 103.3 acres.

Site Location: Located 3.0 miles northeast of Point San Pedro in southern San Pablo Bay in Marin County.

Site Access: Open water site accessible only by vessel via Suisun Bay.

Site Description: The site is a 1,500 foot by 3,000 foot rectangle with the long axis bearing 50 degrees true, centered at Lat 38-00-28N, Long 122-24-55W. Water depths in the site range from 25 to 45 feet.

Current Site Land Use: N/A

Adjoining Land Use(s): N/A

Site Volume and Capacity: This is a dispersive dredged material disposal site. A current policy of the Corps of Engineers (Public Notice No. 93-3) states a specific volume limit for this site of 50,000 cubic yards (cy) per month. The S.F. Bay Regional Water Quality Control Board's Basin Plan limits Disposal at this site to 500,000 cubic yards (cy) per year. The Basin Plan's monthly limit is 500,000 cy.

Estimated Site Life: Under the current close regulation, and expected future regulation, the site life should be unlimited.

Physical Site Construction Requirements and Constraints: N/A

Site References: LTMS for Dredged Material Disposal in the San Francisco Bay Region Phase I, Dec. 1990; USACOE; San Francisco Bay Disposal Site Monitoring and Management Activities Quarterly Report, Jun.-Aug. 1993; Dredging and Disposal Road Map, Aug. 1993, SFBCDC and USACE; Calif. Quad Map, Petaluma Point; NOAA Chart 18654.

Additional Notes:

PLACEMENT SITE PROFILE

Site No:

Site Name:	Suisun Bay (no SF designation)
Site Category:	In-Bay Existing Disposal Site
Site Area:	Water surface area of 128.6 acres.
Site Location:	Located in western Suisun Bay, 0.7 miles from the Contra Costa County shoreline in Solano County.
Site Access:	Open water site; vessel access only.
Site Description:	The site stretches 11,200 feet along the Suisun Bay Channel, is 500 feet wide, and is centered at Lat 38-03-15N, Long 122-05-06W.
Current Site Land Use:	N/A
Adjoining Land Use(s):	N/A
Site Volume and Capacity:	This site has an estimated annual capacity of 200,000 cubic yards (cy) and is restricted to disposal of materials that are 95% sand from Corps' maintenance projects.
Estimated Site Life:	Under the current close regulation, and expected future regulation, the site life should be unlimited.
Physical Site Construction Requirements and Constraints:	N/A
Site References:	LTMS for Dredged Material Disposal in the San Francisco Bay Region Phase I, Dec. 1990 USACOE; San Francisco Bay Disposal Site Monitoring and Management Activities Quarterly Report, Jun.-Aug. 1993; Dredging and Disposal Report, Aug. 1993, SFBCDC and USACE; Calif. Quad Map, Vine Hill; NOAA Chart 18656.
Additional Notes:	Cooperative efforts between commercial sand mining operations and Federal maintenance dredging activity in the Suisun Bay Channel area has a potential to reduce the use of this site.

PLACEMENT SITE PROFILE

Site No: 5

Site Name:	Bay Farm Island Borrow Pit
Site Category:	In-Bay Proposed Disposal Site (Non-Dispersive)
Site Area:	Water surface area of approximately 1,050 acres.
Site Location:	Located in San Francisco Bay, adjacent to Bay Farm Island in Alameda County. Lat. 37-44-30N, Long. 122-17-00W.
Site Access:	Open water site accessible only by vessel from San Francisco Bay. Water depths around the site range from -4.0 to -14.0 feet MLLW.
Site Description:	This site is centered approximately 1.3 miles west of Bay Farm Island in San Francisco Bay. The site is nearly rectangular with dimensions of approximately 10,000 feet by 4,700 feet. This site was a borrow area for construction fill on Bay Farm Island and is therefore deeper than the surrounding areas. Due to the relatively low tidal current velocities in this area of the Bay, this site is not suitable for a dispersive disposal site. The site may be well suited for confined aquatic disposal of dredged material and has been considered as a disposal alternative for various dredging projects including the Port of Oakland's 42 foot project. Water depths inside the site are reported to range up to -40 feet MLLW.
Current Site Land Use:	N/A
Adjoining Land Use(s):	N/A
Site Volume and Capacity:	Various estimates exist for this site with most ranging from 8 to 15 million cubic yards (cy). The variables involved in estimating the capacity at this site include material type, fill height, placement method, and capping requirements. The site could contain approximately 1.7 million cy of material per foot of fill depending on the variables listed above.
Estimated Site Life:	The site life would be highly dependant on the filling rate and final fill elevation.
Physical Site Construction Requirements and Constraints:	This site currently has no regulatory agency designation or approval for dredged material placement. Various regulatory agencies have expressed concerns over possible impacts from dredged material placement at this site. Designation of this site in the near future is unlikely due to the lack of data regarding site use and habitat impacts. Water depths around the site vary from -4.0 to -14.0 feet MLLW and could limit access to the site by large dredge scows and hopper dredges.
Site References:	LTMS for Dredged Material Disposal in the San Francisco Bay Region Phase I, Dec. 1990, USACOE; Dredged Disposal Alternative Study (Final Report), Task 2, South San Francisco Bay Sites, by Nolte and Associates et al., for the USACE San Francisco District; Dredging and Disposal Road Map, Aug. 1993, SFB CDC and USACE; Calif. Quad Map, Hunters Point; NOAA Charts 18649 and 18650.
Additional Notes:	The USACE is studying this site for placement feasibility of material from the Port of Oakland's 42 foot deepening project. The Site's projected availability is the 1st Qtr of 1995. This Site was never used for disposal. Material removed from this site was used as fill for the construction of the Oakland International Airport.

PLACEMENT SITE PROFILE

Site No:

Site Name: Golden Gate Bridge Site (North Tower)

Site Category: In-Bay Proposed Disposal Site

Site Area: Water surface area of approximately 40 acres.

Site Location: This proposed site location is slightly southeast of the Lime Point promontory near the north tower of the Golden Gate Bridge centered at Lat. 37-49-N, Long. 122-28-W.

Site Access: Open water site accessible only by vessel via San Francisco Bay.

Site Description: The proposed site size is 1,180 feet by 1,470 feet with the long axis oriented east to west. Water depths in the proposed site range from 180 to 207 feet. Strong surface tidal currents and tidal rips in this area indicate that material placed in this site would be dispersed with the net movement seaward during ebb tides. The bottom material in this area is assumed to be sand due to the high currents in the area.

Current Site Land Use: N/A

Adjoining Land Use(s): N/A

Site Volume and Capacity: Since this site is a dispersive site, its capacity is dependant on the dispersion characteristics of the site and of the material placed in the site. The variables of this dispersion rate include material type, placement techniques, placement timing (flood tide vs ebb tide vs slack tide), placement rate and seasonal weather and tidal considerations. The site could contain approximately 64,500 cubic yards of material per foot of fill depending on the variables listed above. Detailed investigations would be required to determine the sustainable capacity of the site and all other impacts associated with dredged material disposal at this site.

Estimated Site Life: The life of this site would be strongly dependant on the timing, quantity and type of material placed. Ideally the site would be managed to limit or preclude material accretion at the site or in the surrounding area.

Physical Site Construction Requirements and Constraints: This site currently has no regulatory agency designation or approval for dredged material placement. Designation of this site in the near future is unlikely due to the lack of data regarding site use and habitat impacts. Strong tidal currents and commercial navigation traffic in the outbound shipping lanes near this site and the site's proximity to the north tower caisson of the Golden Gate Bridge may pose some constraints on the site's use.

Site References: Central San Francisco Bay Projects, Dredged Material Disposal Site Investigation, by PTI Environmental Services Inc. and USACOE, San Francisco District; Calif. Quad Map, San Francisco North; NOAA Charts 18649 and 18650.

Additional Notes:

PLACEMENT SITE PROFILE

Site No: 7

Site Name:	San Francisco Bar Channel (SF-8)
Site Category:	Existing Ocean Disposal Site
Site Area:	Water surface area of 1,033 acres.
Site Location:	Located 7,500 feet south of the San Francisco Bar Channel in the Pacific Ocean.
Site Access:	Open water site accessible only by vessel via the Pacific Ocean.
Site Description:	The site is a rectangle 15,000 feet long and 3,000 feet wide and is centered at Lat 37-45-06N, Long 122-35-45W.
Current Site Land Use:	N/A
Adjoining Land Use(s):	N/A
Site Volume and Capacity:	This site is generally restricted to disposal of materials that are 80% clean sand and is normally limited to Corps maintenance dredging of the San Francisco Bar Channel. Due to the site's location in an area of active littoral currents, it is a dispersive site with a relatively high capacity.
Estimated Site Life:	Under the current close regulation, and expected future regulation, the site life should be unlimited.
Physical Site Construction Requirements and Constraints:	N/A
Site References:	LTMS for Dredged Material Disposal in the San Francisco Bay Region Phase I, Dec. 1990 USACOE; San Francisco Bay Disposal Site Monitoring and Management Activities Quarterly Report, Jun.-Aug. 1993; Dredging and Disposal Road Map, Aug. 1993, SFBCDC and USACE; NOAA Chart 18649.
Additional Notes:	This site was formally designated by EPA in 1982 under Section 102 of the Ocean Dumping Act. The designation regulation for this site at 40 CFR 228.12(b)(22) does allow other dredged materials having smaller grain size to be disposed at this site only after appropriate case by case evaluation demonstrates that the action would result in no unacceptable impacts.

PLACEMENT SITE PROFILE

Site No:

Site Name: 102 General Use Site (and U.S. Navy 103 Site)-Newly Designated EPA 'SF-DODS' site.

Site Category: Existing Ocean Disposal Site

Site Area: Water surface area of 2,700 acres.

Site Location: Approximately 49 nautical miles west of the Golden Gate, off the continental shelf.

Site Access: Open water site accessible only by vessel via the Pacific Ocean.

Site Description: This site is an oval shaped area of approximately 6.5 square nautical miles, whose center is located at Lat. 37-39-00N and Long. 123-29-00W. The water depths at this site are approximately 9,500 feet. This site was formerly a chemical and munitions dump site for the US Navy. The site has been formally designation by the EPA as 'SF-DODS', or Deep Ocean dredged material Disposal Site, for disposal of suitable dredged material.

Current Site Land Use: N/A

Adjoining Land Use(s): None.

Site Volume and Capacity: The site capacity is currently estimated at 6 million cubic yards (cy) per year, or a total of 300 million cy over 50 years. A capacity of 6 million cy per year will be used until December 31, 1996. Site capacity after that date will be based on LTMS studies, or on a separate alternatives analysis completed by EPA.

Estimated Site Life: For planning purposes, a site life of 50 years has been established by EPA. However, use of the site will be prohibited if management and monitoring program is not implemented by Dec. 31, 1996.

Physical Site Construction Requirements and Constraints: Due to the site's location, long open ocean transits are required in order to reach the site. This could be a problem for smaller vessels or those not intended for open ocean operation. A formal site management and monitoring plan was published as part of the formal designation process. Implementation of site monitoring will cost approximately \$400,000 to \$600,000 per year for tier 1 testing. This monitoring plan is required for use at this site.

Site References: Dredging and Disposal Road Map, SFBCDC & USACE, Aug. 1993. LTMS for Dredged Material Disposal in the San Francisco Bay Region Phase I, Dec. 1990 USACOE; San Francisco Bay Disposal Site Monitoring and Management Activities Quarterly Report, Jun.-Aug. 1993; Inspection of initial disposal operations for US Navy by Gahagan and Bryant Associates, Inc. personnel. Personal contact with Gail Louis, U.S. EPA, Region IX. Federal Register, Vol. 59, No. 154; Rules and Regulations.

Additional Notes:

PLACEMENT SITE PROFILE

Site No: 9

Site Name:	Port Sonoma-Marin Marina
Site Category:	Existing Re-use; Non-Tidal
Site Area:	The total site area is approximately 110 acres, including 40 acres of water area, and a dredged material placement pond area of approximately 20 acres.
Site Location:	Port Sonoma-Marin is located adjacent to, and east of, the Petaluma River (slightly upstream of San Pablo Bay in Sonoma County).
Site Access:	Land based access to this site is via State Highway 37 located directly north and adjacent to the site. Rail access to the site is via the Southern Pacific Rail Road line located directly south and adjacent to the site. Water access to the site is via San Pablo Bay and the Federally maintained Petaluma River Channel across the San Pablo Bay flats and up the Petaluma River.
Site Description:	The overall site consists of a small craft marina and related facilities. The portion of the site of interest consists of 5 to 6 diked ponds used to store dredged materials. Some of the ponds are used exclusively for materials dredged from within the Port and others are used for storage and drying of dredged materials imported from other dredging projects within the Bay. The majority of imported material is slightly contaminated and unfit for unconfined aquatic disposal. Normal operations of this facility include placement of wet dredged material, natural drying of the material, and removal of the dried material to Redwood Sanitary Landfill for use as cover, daily cover and liner material depending on the specific qualities of the various materials.
Current Site Land Use:	Marina operations and dredged material storage.
Adjoining Land Use(s):	The surrounding lands are primarily historic tidal wetlands that were reclaimed for agricultural use in the early 1900's. Most of the surrounding land is in seasonal agricultural production. Small portions of the lands directly south of the Port are in light industrial use.
Site Volume and Capacity:	The full capacity of all ponds may be up to 300,000 cubic yards. The useable annual capacity for imported material is highly variable depending on drying and removal operations and may be approximately 60,000 to 80,000 cubic yards per year at best.
Estimated Site Life:	The site life of this operation is only limited by drying and removal operations. As long a viable market exists for the dried material, the site life is unlimited.
Physical Site Construction Requirements and Constraints:	The site is constructed and operational at this time. Various sections of the pond dikes are maintained and upgraded on an as needed basis with on-site material. The main constraint for this site is the limited access into the marina and off-loading areas due to water depth. The marina is normally maintained to -6 feet MLLW and the Petaluma River Channel is maintained to -8 feet MLLW. These water depths require tidal operations or light loading of dredged scows.
Site References:	Personal contact with Brian Swedberg, Harbormaster of the Port Sonoma-Marin Marina; Dredging and Disposal Road Map, Aug. 1993, SFBCDC and USACE; LTMS-Engineering Elements of Dredged Material Rehandling Facilities, Task 7, Final Conceptual Level Design Report Cargill and Leonard Ranch Sites, by Gahagan and Bryant Associates, Inc. for USACOE, San Francisco District; Calif. Quad Maps, Novato and Petaluma Point; NOAA Chart 18654.
Additional Notes:	

PLACEMENT SITE PROFILE

Site No:

Site Name:

Leonard Ranch

Site Category:

Proposed Re-use, Non-Tidal

Site Area:

The site area is a total of 224 acres.

Site Location:

Leonard Ranch is located east of the Petaluma River, directly east of the Port Sonoma-Marin Marina, north of San Pablo Bay directly north of Sonoma Baylands, and directly south of State Highway 37 in Sonoma County.

Site Access:

Land based access to this site is via State Highway 37 located directly north and adjacent to the site. Rail access to the site is via the Southern Pacific Railroad line located directly south and adjacent to the site. No direct water access is available to the site. Water access near the site (3,200 feet) is via San Pablo Bay and the Federally maintained Petaluma River Channel and the San Pablo Bay flats and also up the Petaluma River into the Port Sonoma-Marin Marina (1,000 feet).

Site Description:

The Leonard Ranch site is Parcel 15 in the Sonoma County Assessor's Parcel Map, Book 68, Page 14 (APN 68-14-15). The site consists of 224 acres of reclaimed marsh and bayland that has been in agricultural production since reclamation in the early 1900's according to local sources. Due to subsidence the elevation of this site averages -3 feet NGVD. There is a house, various farm equipment and out buildings on approximately 8 acres in the south east corner of the property. The site is currently owned by the Sonoma Land Trust. This site has been investigated for use as a rehandling facility for dredged materials. Normal operations of this facility would include placement of wet dredged material, natural drying of the material and removal of the dried material to an end use. One end use could be at Redwood Sanitary Landfill for use as cover, daily cover, or liner material.

Current Site Land Use:

Seasonal agricultural production and domestic use.

Adjoining Land Use(s):

The surrounding lands are also primarily historic tidal wetlands that were reclaimed for agricultural use in the early 1900's. Most of the surrounding land is in seasonal agricultural production. East of the site is Port Sonoma-Marin a pleasure craft marina, and small portions of the lands east of the site are in light industrial use.

Site Volume and Capacity:

The volume and capacity of this site are dependent on height of dikes constructed around the site. Previous studies indicated a site capacity of 783,000 cubic yards to 1.18 million cubic yards depending on material characteristics and placement depths.

Estimated Site Life:

LTMS studies of this site assume a 50 year design life for economic analysis purposes. Under operation as a rehandling facility, this site's life is theoretically unlimited.

Physical Site Construction Requirements and Constraints:

Construction requirements include containment levees and interior dikes, a barge off-loading system, a dredged material discharge pipeline, effluent control pond, and return water structures, and related support and maintenance facilities. Construction constraints include a high voltage power line which bisects the site, possible environmental constraints such as traffic impacts, seasonal and tidal wetland considerations and ownership, operation and permitting requirements.

Site References:

Dredging and Disposal Road Map, Aug. 1993, SFBCDC and USACE; LTMS - Engineering Elements of Dredged Material Rehandling Facilities, Task 7, Final Conceptual Level Design Report, Cargill and Leonard Ranch Sites, by Gahagan and Bryant Associates, Inc. for USACOE, San Francisco District; Calif. Quad Maps, Petaluma Point and San Pablo Point; NOAA Chart 18654.

Additional Notes:

PLACEMENT SITE PROFILE

Site No: 11

Site Name:	Praxis-Pacheco
Site Category:	Proposed Re-use, Non-Tidal (also a historic Re-use, Non-Tidal Site)
Site Area:	The total site area is approximately 245 acres. The useable site area is approximately 145 to 165 acres.
Site Location:	This site is located at and west of the confluence of Pacheco Creek and Suisun Bay in Contra Costa County, near the City of Martinez. Lat. 38-02-30N, Long. 122-05-00W.
Site Access:	Land based access to this site is via Interstate Highway 680 and Waterfront Road. Rail access to the site is via the Southern Pacific Railroad line located across Waterfront Road from the site. Water access to the site is via Suisun Bay and the Federally maintained Suisun Bay Channel.
Site Description:	The site is a 245 acre parcel (APN 159-310-132) of land zoned for industrial use. Approximately 80 acres of this site adjacent to Pacheco Creek and Suisun Bay is tidal brackish marsh or wetlands and therefor not suitable for dredged material placement or rehandling activities. The site owner, Praxis Development, is attempting to develop an industrial park on the site. A 20 acre portion of the site is currently used for stockpiling sand mined from Suisun Bay. The useable (145 to 165 acre) portion of the site has previously been used for dredged material placement and dredged material rehandling.
Current Site Land Use:	The site is currently vacant except for the 20 acre sand stockpiling operation in the northwest corner.
Adjoining Land Use(s):	Oil docks and refineries are located east and west of the site, with a salvage yard located southwest of the site. Several petroleum pipelines are located between the site and Waterfront Road. Tidal marshes and wetlands exist east and west of the site.
Site Volume and Capacity:	The volume and capacity of this site are dependent on the height of dikes constructed around the site. Previous studies indicated a site capacity of approximately 2.5 million cubic yards depending on material characteristics and placement depths. A rehandling facility on the site could have a annual throughput of approximately 466,000 cubic yards.
Estimated Site Life:	Previous LTMS studies of this site assume a 50 year design life for economic analysis purposes. Actual site life is dependent on filling rate, dike height, material type and other factors. Under operation as a rehandling facility, this site's life is theoretically unlimited.
Physical Site Construction Requirements and Constraints:	The site is bisected by a Contra Costa Sanitary District treated sewage outfall pipe that extends into Suisun Bay. No construction on top of this pipe is acceptable. Several petroleum pipelines between the site and Waterfront Road would require special consideration relative to site access roads. The site is bordered by environmentally sensitive marshes and wetlands.
Site References:	Dredging and Disposal Road Map, Aug. 1993, SFBCDC and USACE; LTMS-Engineering Elements of Dredged Material Rehandling Facilities, Task 7 Final Conceptual Level Design, Appendix H, by Gahagan and Bryant Associates for USACOE, San Francisco District; Calif. Quad Map, Vine Hill; NOAA Chart 18656.
Additional Notes:	

PLACEMENT SITE PROFILE

Site No:

Site Name: Sonoma Baylands Project (and/or 30 Acre Coastal America project).

Site Category: Existing Tidal Wetland Restoration

Site Area: The total site area is approximately 322 acres. A 30 acre portion of this site is being utilized for a demonstration project of the Coastal America program.

Site Location: This site is located adjacent to Suisun Bay and slightly east of the Petaluma River in Sonoma County. Lat. 38-07-10N, Lon. 122-29-00W.

Site Access: Land access to the site is via State Highway 37 and Reclamation Road or an unnamed private road that is access to Port Sonoma-Marin Marina and related areas. Rail access to the site is from the Southern Pacific Railroad Line that is located directly north of the site. No direct water access is available to the site. Water access near the site (1,000 to 1,500 feet distance) is via San Pablo Bay, and the Federally maintained Petaluma River Channel across the San Pablo Bay flats.

Site Description: Sonoma Baylands is an area of reclaimed march and baylands that is currently owned by the Sonoma Land Trust. The Sonoma Land Trust and the California State Coastal Conservancy have proposed this site for tidal salt marsh restoration. Due to the subsidence of this land from agricultural activities the current average elevation (-2 feet NGVD) must be increased by approximately 5.4 feet to develop a functional tidal salt marsh. Using clean dredged material for fill is a proposed way of creating the proper elevation in this area significantly faster than natural sedimentation processes.

Current Site Land Use: The pilot project on the site is complete, with dredged material from the Port of Oakland to be placed over a two year period beginning in Spring 1995.

Adjoining Land Use(s): Adjoining lands are in seasonal agricultural production or are tidal wetlands. Port Sonoma-Marin Marina is a small bay marina and some light industrial facilities are located northwest of this site.

Site Volume and Capacity: The actual volume of material required is dependent on the material type, placement method and other factors. The current estimates for the project are approximately 2.5 million cubic yards (cy) for the entire project, and 300,000 cy for the demonstration project.

Estimated Site Life: The duration of filling activity at the site is dependent upon material availability and dredging project scheduling.

Physical Site Construction Requirements and Constraints: This project would require the improvement of existing levees, construction of new levees and dikes, and development of a temporary pumpout facility to place dredged materials at the site. Existing power lines crossing the site will require protection and/or raising.

Site References: Dredging and Disposal Road Map, Aug. 1993, SFBCDC and USACE; Sonoma Baylands Enhancement Project: Technical Studies, by ENTRIX et al. for Sonoma Land Trust and the California Coastal Conservancy, Sept. 1991; Coastal Quad Maps, Petaluma Point and Sears Point; NOAA Chart 18654.

Additional Notes: This project is partially permitted and currently under consideration for construction during the Federal deepening project at the Port of Oakland which is scheduled to begin in Dec. 1994.

PLACEMENT SITE PROFILE

Site No: 13

Site Name: Hamilton Field: North Antennae Field

Site Category: Proposed Re-use, Non-Tidal

Site Area: The site area is approximately 240 acres.

Site Location: Hamilton Army Airfield is located west of San Pablo Bay and southeast of the City of Novato and Highway 101. The north antennae field is located south of the existing Bel Marin Keys subdivision and north of the airfield.

Site Access: Road access to the site is via US Highway 101, various public roads and restricted access roads. The Southern Pacific Railroad Line runs near the site. Water access is via San Pablo Bay, however due to shallow water depths along the margins of the Bay, no direct water access is available.

Site Description: References specifically defining the site boundaries were not found. This site is located north of the runway at Hamilton Field. Novato Sanitary District apparently has a long term lease on the southern portion of the site which is owned by the State Lands Commission. The California Department of Fish and Game, State Lands Commission, and other agencies are interested in habitat creation on this site which may utilize dredged material. Confined dredged material disposal and/or dredged material rehandling may be inconsistent with the current BCDC airport priority use designation. In LTMS studies, a three stage site ranking for this site indicated that it was highly feasible for habitat development.

Current Site Land Use: Inactive military use, agricultural, floodplain and various seasonal and tidal wetlands, and related habitat.

Adjoining Land Use(s): Inactive military use, agricultural, floodplain, existing and potential commercial/residential development, and various seasonal and tidal wetlands, and related habitat.

Site Volume and Capacity: Estimated site capacity is 2.7 million cubic yards. Actual site capacity is dependent on the specific site design, dredged material placement rates, dredged material type and other factors.

Estimated Site Life: Site life is dependent on the specific site design, dredged material placement rates, dredged material type, and other factors.

Physical Site Construction Requirements and Constraints: Habitat development with dredged material would likely require construction of levees, dikes, off-loading and return water facilities, and related support facilities. The major site constraints would likely be limited water access from San Pablo Bay and environmental and institutional constraints.

Site References: Personal contact with Scott Miner of USACOE, San Francisco District; Dredging and Disposal Road Map, Aug. 1993, SFBCDC and USACE; Detailed Study of Dredged Material Land Disposal Alternatives, by Ogden Beeman & Associates et al., for USACOE, San Francisco District; Beneficial Reuse and/or Nonaquatic Disposal for Dredged Material from San Francisco Bay, Stage III, Final Draft Report, by Moffatt & Nichol, Engineers for USACOE, San Francisco District, May 1993; Calif Quad. Maps, Petaluma Point and Novato; NOAA Chart 18654.

Additional Notes:

PLACEMENT SITE PROFILE

Site No:

Site Name:

Hamilton Field: Habitat Creation

Site Category:

Existing Tidal Wetland Restoration

Site Area:

The estimated site area from the quad map is approximately 700 acres. *Other references indicated an 1,150 acre site.

Site Location:

Hamilton Army Airfield (HAAF) is located west of San Pablo Bay, east of the City of Novato and Highway 101. The airfield is centered approximately at Lat. 30-03-00N, Long. 122-30-30W.

Site Access:

Road access to the site is via US Highway 101, various public roads and restricted access roads. The Southern Pacific Railroad Line crosses the northwest corner of the site. Water access is via San Pablo Bay, however due to shallow water depths at the margins of the Bay no direct water access is available.

Site Description:

The US Army owns one third of HAAF and is currently in the process of disposing of the property. The Federal Government plans to use portions of the property for habitat restoration and may need dredged material to accomplish restoration. Currently the entire low-lying airfield portion of site is being studied as a potential tidal wetlands habitat creation site.

Current Site Land Use:

The current site use includes active and inactive military uses and various seasonal and tidal wetlands and related habitat. The runway is protected by a system of levees and pumps. Most of the runway is -7.0 to -8.0 feet MLLW.

Adjoining Land Use(s):

Active and inactive military use, agricultural, floodplain, existing and potential commercial/residential development and various seasonal and tidal wetlands and related habitat. Lands to the northeast are owned by a residential developer.

Site Volume and Capacity:

Estimated site capacity is 5 to 6 million cubic yards. Actual site capacity is dependent on the specific site design, dredging material placement rates, dredged material type, and other factors.

Estimated Site Life:

Site life is dependent on the specific site design, dredging material placement rates, dredged material type, and other factors.

Physical Site Construction Requirements and Constraints:

Habitat development with dredged material would likely require construction of levees, dikes, off-loading and return water facilities, and related support facilities. The major site constraints would likely be limited water access from San Pablo Bay and environmental and institutional constraints.

Site References:

Personal contact with Scott Miner USACE, San Francisco District; Dredging and Disposal Road Map, Aug. 1993; SFBCDC and USACE; Detailed Study of Dredged Material Land Disposal Alternatives, by Ogden Beeman & Associates et al., for USACE, San Francisco District; Beneficial Reuse and/or Non-aquatic Disposal for Dredged Material from San Francisco Bay, Stage III, Final Draft Report, by Moffatt & Nichol, Engineers for USACE, San Francisco District; May 1993; Calif Quad. Maps, Petaluma Point and Novato; NOAA Chart 18654.

Additional Notes:

*Detailed Study of Dredged Material Land Disposal Alternatives, by Ogden Beeman & Associates et al., for USACE, San Francisco District;

PLACEMENT SITE PROFILE

Site No: 15

Site Name:	Montezuma Wetlands
Site Category:	Proposed Tidal Wetlands Restoration and Re-use, Non-Tidal
Site Area:	The total site area is 2,400 acres, including a tidal and seasonal wetlands restoration area of 1,800 acres, and a rehandling facility of 200 acres. The other 400 acres is high ground that will be retained in a water related industry zoning and use.
Site Location:	This project site is adjacent to, and north and west of Montezuma Slough near it's confluence with the Sacramento and San Joaquin Rivers and Suisun Bay. The project area is within Solano County. Lat. 38-05-00N, Long. 122-52-30W.
Site Access:	Water access is via Suisun Bay, the Sacramento River, Montezuma Slough and McDougal Cut. Road Access is via State Highway 12 to Shiloh or Birds Landing Road, to Collinsville Road. Rail access is via the Union Pacific Railroad which runs close to, or onto the site.
Site Description:	The site is a proposed tidal and seasonal marsh restoration project that also includes a dredged material rehandling facility in an area zoned for water related industry. The marsh restoration project includes 1,800 acres of the total 2,400 acre site and would use dredged material to restore the land to an elevation suitable for tidal and seasonal wetlands. The rehandling facility, on approximately 200 acres, would be on the site of an existing sand and shell material facility. Elevations on the site range from -9 feet NGVD to +10 feet NGVD.
Current Site Land Use:	Current site land use includes the sand and shell material facility operations and possibly agricultural and grazing activities.
Adjoining Land Use(s):	Adjoining lands include managed wetlands (duck clubs), agricultural land, and business and residential property in the adjacent City of Collinsville.
Site Volume and Capacity:	The sites capacity is dependent on material type, placement methods, volume throughput of the rehandling facility, and other factors. Current estimates for the material for habitat restoration is 20 million cubic yards.
Estimated Site Life:	Unknown, varies on filling rates, final project configuration and other factors.
Physical Site Construction Requirements and Constraints:	The project would include various levees and dikes to contain dredged material, store process water, and contain rehandling material as well as off-loading facilities and related temporary project offices, labs and related facilities.
Site References:	Dredging and Disposal Road Map, Aug. 1993, SFBCDC and USACE; LTMS - Engineering Elements of Dredged Material Rehandling Facilities, Task 7, Final Conceptual Level Design Report Cargill and Leonard Ranch Sites, by Gahagan and Bryant Associates, Inc. for USACOE, San Francisco District; Calif. Quad Maps, Antioch North and Honker Bay, NOAA Chart 18656.
Additional Notes:	This project is sponsored by Levine-Fricke Restoration Corp. and Calcellus Development Corp., the land owner. A draft EIS on the project is due out soon.

PLACEMENT SITE PROFILE

Site No

Site Name:	Skaggs Island
Site Category:	Proposed Tidal Wetlands Restoration
Site Area:	The total site area is 4,310 acres and the project area is approximately 3,000 acres.
Site Location:	Skaggs Island is located in Napa County, north of San Pablo Bay and northwest of Vallejo. The Island is bounded by San Pablo Creek, Napa Slough, Second Napa Slough, and Hudeman Slough. Lat. 38-11-00N, Long. 122-23-30W.
Site Access:	Road access to the site is via State Highway 37 and Skaggs Island Road. No direct rail access to the site exists. Southern Pacific Railroad tracks are located approximately one mile north of the Island. Shallow water (-1 to -5 feet MLLW) access to the site is via San Pablo Bay, Sonoma Creek, and various other slough channels that eventually connect to the Napa River. Deep water (-10 to -15 feet MLLW, or greater) access to the site exists.
Site Description:	Skaggs Island has a total land area of approximately 4,300 acres. Approximately 1,000 acres northeast of Rainbow Point is privately owned and under cultivation. The U.S. Navy owns the remainder of the Island and has communication facilities at various locations and leases other parts of the Island for agricultural uses. Navy housing and support facilities occupy approximately 60 acres at the northern end of the Island. The Navy currently plans to close the Navy facility and transfer the land to other uses. The site has limited conventional use due to limited water supply, flood hazard, and poor soil conditions. The site is currently under LTMS consideration for marsh restoration/creation with the use of dredged material and/or as a confined disposal site.
Current Site Land Use:	This site currently contains US Navy communications facilities, related housing and support facilities, agricultural lands, and a FAA communication facility.
Adjoining Land Use(s):	Adjoining lands are principally agricultural, tidal marshes and wetlands, and evaporation ponds related to salt production facilities.
Site Volume and Capacity:	Previous LTMS studies have indicated that the site capacity could vary from 10.5 to 16.1 million cubic yard (cy) depending upon final site design, material characteristics, foundation consolidation, and other factors. The estimated capacity for this site if it is used as a confined disposal site is approximately 72 million cubic yards.
Estimated Site Life:	The duration of dredged material placement operations at this site is dependent on the filling rate, material type, and other factors. Estimates for project duration are from 10.5 to 16 years for tidal marsh restoration/creation.
Physical Site Construction Requirements and Constraints:	Construction requirements include perimeter and interior dikes, off-loading facilities, return water facilities, and other support facilities. The main constraint for this site is that deep water for off-loading facilities is approximately 270 feet from the furthest containment cell in the project. This requires a booster pump which significantly increases off-loading costs.
Site References:	Beneficial Reuse and/or Non-aquatic Disposal for Dredged Material from San Francisco Bay, Stage III, Final Draft Report, by Moffatt & Nichol, Engineers for USACOE, San Francisco District, May 1993; Dredging and Disposal Map, Aug. 1993, SFBCDC and USACE; Calif. Quad Maps, Sears Point and Cuttings Wharf; NOAA Chart 18654
Additional Notes:	The U.S. Fish & Wildlife Service, in cooperation with other agencies, is interested in acquiring the entire Island for habitat restoration and has approached the private landowners who expressed an interest in selling their portion of the Island (1,000 acres).

PLACEMENT SITE PROFILE

Site No: 17

Site Name: Cargill Salt Division 1 (West Evaporator Ponds)

Site Category: Proposed Tidal Wetlands Restoration

Site Area: The total surface area of all 11 ponds is approximately 7,200 acres.

Site Location: The Cargill Division 1 evaporator ponds are located north of San Pablo Bay, between the Napa River and Napa Slough in Napa and Solano Counties. Lat. 38-10-00N, Long. 122-20-00W.

Site Access: Road access to the northern most pond is via State Highway 12, Ramal or other public roads to private roads. Road access to the southern most ponds is via State Highway 37 and private roads. No road access is available to the majority of the ponds. No direct rail access exists to the site. Shallow water access to all ponds is via San Pablo Bay, the Napa River, and various Sloughs. Deep water (-15 feet MLLW) access is available only to the western most ponds via the Napa River Channel.

Site Description: The site consists of 11 ponds ranging in size from 315 to 1,320 acres. These ponds are series of diked evaporation ponds previously used in salt production operations. The Cargill Corporation is in the final stages of selling this property to a group of agencies including the Department of Fish and Game, the State Lands Commission, Coastal Commission, and the Shell Oil Spill Litigation Settlement Trustee Committee. The Department of Fish and Game would manage the property for habitat restoration. LTMS studies have investigated raising the pond bottom elevation by partially filling the ponds with dredged material. Conversion of these ponds to tidal marsh and wetlands may require raising the pond bottom elevations by -0.5 to -2 feet MLLW and various improvements to promote tidal circulation.

Current Site Land Use: Inactive evaporation ponds for salt production.

Adjoining Land Use(s): Adjoining lands are principally agricultural, tidal marshes, wetlands, and US Navy facilities currently slated for closure.

Site Volume and Capacity: The site capacity is dependent on the final restoration plan, material type, material placement technique, and other factors. Current estimates of the in situ volume of dredged material required to complete the project vary from 7 to 12.8 million cubic yards.

Estimated Site Life: The duration of dredged material placement operations at the site is dependent on the filling rate, material type and other factors. Current estimates for project duration are from 7 to 12.8 years.

Physical Site Construction Requirements and Constraints: The main construction features of this project would be interior dikes, off-loading and return water facilities, and related support facilities. The major site constraints are the existing power lines crossing the site which require year around accessibility, and the lack of deep water access to all ponds. A major factor in future project planning will be determining the desired habitat combination and configuration of ponded and tidal habitat.

Site References: Personal contact Jim Swanson of CDF&G; Beneficial Reuse and/or Nonaquatic Disposal for Dredged Material from San Francisco Bay, Stage III Final Draft Report, by Moffatt & Nichol, Engineers for USACOE, San Francisco District, May 1993; Dredging and Disposal Road Map, Aug. 1993, SFB/CDC and USACE; Calif. Quad Map, Cuttings Wharf, NOAA Chart 18654.

Additional Notes: Jim Swanson of the California Department of Fish and Game indicated that at this time he did not see any need to use dredged materials inside these ponds for habitat restoration.

PLACEMENT SITE PROFILE

Site No:

Site Name:	Cargill Salt Division 1 (East Crystallizer Ponds)
Site Category:	Proposed Re-use, Non-Tidal, and Confined Disposal
Site Area:	The total site area is 1,462 acres. The proposed rehandling facility would use approximately 370 acres of the site. The proposed confined disposal facility would use approximately 420 acres.
Site Location:	These crystallizer ponds are located in Napa County, directly east of the Napa River, approximately 5 miles northwest of Vallejo. Lat. 38-11-40N, Long. 122-18-10W.
Site Access:	Road access to the site is via State Highway 29 and Green Island Road. Rail access is via the Southern Pacific tracks which bisect the site. Water access is via the Napa River Channel with a depth of -15 feet MLLW, and an on-site barge access channel and slip with an approximate depth of -8 feet MLLW.
Site Description:	The site consists of 18 major ponds and related dikes, levees, ditches, weirs, pumps, salt harvesting and stockpiling equipment, and related support facilities. A large stockpile of salt crystals approximately 50 feet high covering more than an acre remains on the site. Of special note is the on-site barge slip with a dock and barge loading equipment. This is currently zoned AW:FP-1 (Agricultural Watershed, Primary Floodplain). Various LTMS studies have investigated this site for use as a dredged material rehandling facility and as a confined disposal facility for dredged material.
Current Site Land Use:	Inactive salt crystallizing ponds and related facilities.
Adjoining Land Use(s):	The Napa County Airport is located directly northeast of the site. Other adjacent lands are primarily agricultural with low density residential and light industrial use on the northeast side of Green Island Road.
Site Volume and Capacity:	The proposed rehandling facility would have a capacity of 1.6 to 3.2 million cubic yards (cy) depending on material type and other factors. The average capacity would be approximately 1.9 million cy and the average annual throughput could average 1.5 million cy. The confined disposal facility capacity could vary from 5 to 9 million cy depending on material type, placement method, and other factors.
Estimated Site Life:	LTMS studies of the rehandling facility assumed a 50 year design life for economic analysis purposes. Under operation as a rehandling facility, this site's life is theoretically unlimited. The cycle time of a rehandling facility is dependent on material type, weather conditions, and other factors. The estimated cycle time is up to 20 months. The site duration of the confined disposal facility is dependent on filling and consolidation rates and other factors. Current estimates are 5 to 9 years.
Physical Site Construction Requirements and Constraints:	Both the rehandling and confined disposal facilities would require levee and dike construction and/or upgrading, off-loading and return water facilities, and related support facilities. In both cases, it is likely that portions of the existing site facilities could be used. The rehandling facility would require additional material harvesting and reloading facilities. Deepening the existing barge slip to -15 feet MLLW would require approximately 120,000 cubic yards of dredging.
Site References:	LTMS - Engineering Elements of Dredged Material Rehandling Facilities, Task 7, Final Conceptual Level Design Report Cargill and Leonard Ranch Sites, by Gahagan and Bryant Associates, Inc. for USACOE San Francisco District; Beneficial Reuse and/or Nonaquatic Disposal for Dredged Material from San Francisco Bay, Stage III, Final Draft Report, by Moffatt & Nichol, Engineers for USACOE, San Francisco District, May 1993; Dredging and Disposal Report, Aug. 1993, SFBCDC and USACE; Calif. Quad Map, Cuttings Wharf, NOAA Chart 18654.
Additional Notes:	Cargill has indicated an interest in selling this facility and a slight interest in converting it into a confined disposal and/or rehandling facility, however they have declined to state a price. It is likely that the proposed uses of this site would likely require a special use permit from Napa County.

PLACEMENT SITE PROFILE

Site No: 19

Site Name: Cullinan Ranch

Site Category: Proposed Tidal Wetlands Restoration

Site Area: The total site area is 1,493 acres.

Site Location: This site is located north of San Pablo Bay, west of Vallejo and Mare Island Naval Shipyard, and south and east of the Cargill Salt west evaporator ponds.

Site Access: Road access is via State Highway 37 and private roads. Rail access to the site is not available. Water access to the eastern edge of the site is via the Napa River Channel with a depth of -15 feet MLLW. Shallow water access into the site is via Dutchman Slough.

Site Description: This site consists of historic diked baylands that were recently removed from agricultural production and are now managed as a seasonal wetland. The property was recently purchased by the US Fish and Wildlife Service (USF&WS). The USF&WS and the LTMS are currently conducting hydrologic and sedimentation studies of the site and plan to have a draft plan developed by December, 1994. The specific purpose for the purchase of this land was for restoration of the California clapper rail habitat. Additional benefits will likely include habitat for the salt marsh harvest mouse, black rail and other species. Dredged materials may be used in habitat restoration activities on this site.

Current Site Land Use: The site is currently being converted from active agricultural production into wildlife habitat.

Adjoining Land Use(s): This site is adjoined by inactive evaporation ponds, an active naval shipyard which is slated for closure and tidal wetlands.

Site Volume and Capacity: Estimated capacity is up to 7.2 million cubic yards for habitat creation.

Estimated Site Life: Dredged material placement duration is dependent on the specific site plan and other related factors.

Physical Site Construction Requirements and Constraints: If dredged material is used for habitat development, the main construction features of this project would include levees, dikes, off-loading and return water facilities, and related support facilities. The major site constraints are existing power lines crossing a northern portion of the site which will require year around access. A major factor in future project planning will be determining the desired habitat combination and configuration.

Site References: Beneficial Reuse and/or Nonaquatic Disposal for Dredged Material from San Francisco Bay, Stage III Final Draft Report, by Moffatt & Nichol, Engineers for USACOE San Francisco District, May 1993; Dredging and Disposal Road Map, Aug 1993 SFBCDC and USACE; Calif. Quad Maps, Cuttings Wharf and Mare Island; NOAA Chart 18654.

Additional Notes: FWS, the project sponsor, is unsure whether they will use dredged material. Shell Oil Trust & LTMS have partial funds for planning. Additional funds are needed.

PLACEMENT SITE PROFILE

Site No: _____

Site Name: Jersey Island

Site Category: Proposed Re-use, Non-Tidal (Levee Rehabilitation)

Site Area: The total Island area is approximately 3,500 acres. The Iron House Sanitation District owns approximately 3,000 acre. Ted Halsey owns approximately 50 acres. The remainder is privately held by others.

Site Location: Jersey Island is located on the south side of the San Joaquin River approximately between river miles 10 and 13, in Contra Costa County. The Island is bounded by the San Joaquin River, Dutch Slough and Taylor Slough. Lat. 38-02-00N, Long. 122-41-00W.

Site Access: Road access to the site is via State Highway 4, Cypress Road and Jersey Island Road. No rail access to the site exists. Deep water access (approximately -35 feet MLLW) is via Suisun Bay, New York Slough and Stockton Deep Water Ship Channel to the San Joaquin River. Dutch and Taylor Sloughs have water depths from -7 to -20 feet MLLW in most areas.

Site Description: The Island is primarily agricultural land. Most of the Island was recently purchased by Iron House Sanitary District. Agricultural application and/or ponding of treated waste water may be a current and future use on the Island. Reclamation District 830 has the primary responsibility for the levees on the Island which are "non project" flood control levees. Portions of the levees along the San Joaquin River are covered by a direct agreement between the Federal government and The Port of Stockton that assures maintenance. LTMS studies have investigated levee rehabilitation on the Island with dredged material. The land surface inside the Island is between 0 to -15 feet NGVD. The Island is within the jurisdiction of the Delta Protection Commission.

Current Site Land Use: The current site land use is agriculture and possible current and future agricultural application and/or ponding of treated waste water.

Adjoining Land Use(s): To the north are Sherman and Bradford Islands which are primarily in agricultural use, to the south is the City of Oakland residential and agricultural land, to the west is Big Break a flooded island, and to the east is Bethel Island an island with significant recreational development and Franks Tract a flooded island and State Recreation Area.

Site Volume and Capacity: LTMS reports indicate an estimated need of approximately 1.6 million cubic yards for levee rehabilitation. The California Department of Water Resources is currently working with the Island owners and the USACOE, San Francisco District, to use approximately 250,000 cubic yards of sand from dredging in New York Slough during 1994 for levee rehabilitation on Jersey Island.

Estimated Site Life: LTMS reports investigated a 2 year project for levee rehabilitation. Actual project duration is dependent upon the final plans. There may be a continuing need for smaller quantities of material for levee maintenance.

Physical Site Construction Requirements and Constraints: A levee rehabilitation project would require levee preparation, material placement, spreading and compaction and may also require surface and ground water monitoring. Shallow water depths in some areas may preclude direct barge access. Major power lines and gas mains cross the Island and may add significant constraints to construction on or near these utilities.

Site References: Personal contact with Curt Schmutte of the California Department of Water Resources; LTMS, Investigation of Dredged Material Disposal Alternatives in the Sacramento/San Joaquin Delta for Sediments Dredged from San Francisco Bay, October 1990, by Ogden Beeman and Associates, et al. for USACOE, San Francisco District; LTMS Alternative Disposal Options, San Francisco Bay Region, Final Report, January 1992, by Ogden Beeman and Associates, et al., for USACOE, San Francisco District; Sacramento-San Joaquin Delta Atlas, California Department of Water Resources, 1993; Calif Quad Map, Jersey Island; NOAA Chart 18661.

Additional Notes:

PLACEMENT SITE PROFILE

Site No: 21

Site Name: Sherman Island (rehandling site)

Site Category: Proposed Re-use, Non-Tidal (Levee Rehabilitation)

Site Area: The total Island area is approximately 9,937 acres. The California Department of Water Resources has purchased or is in the process of purchasing approximately 2,000 acres on the Island. Various interests own the remainder of the Island.

Site Location: Sherman Island is located on the east side of the Sacramento River and the west side of the San Joaquin River from the confluence of the rivers to approximately river miles 10 and 15 respectively, in Sacramento County. The Island is bounded by the Sacramento River, the San Joaquin River, Horseshoe Bend and Threemile, Cabin and Mayberry Sloughs. Lat. 38-03-30N, Long. 121-43-30W.

Site Access: Road access is via State Highway 160 and various public and private roads. No rail access is available to this site. Water access is via Suisun Bay, the Sacramento River and Horseshoe Bend or the San Joaquin River and by Threemile and Mayberry Sloughs. Water depths in these channels change significantly in various locations and range from -1 to -30 feet MLLW.

Site Description: The Island is primarily agricultural land. The California Department of Water Resources has purchased or is in the process of purchasing approximately 2,000 acres on the Island. Reclamation District 341 has the primary responsibility for the levees on the Island. Portions of the levees along the Sacramento River, Horseshoe Bend and Threemile Slough are Federal "project" flood control levees. Portions of the levees along Mayberry Slough and the San Joaquin River are local "non-project" flood control levees. LTMS studies have investigated dredged material rehandling facilities and levee rehabilitation on the Island with dredged material. The land surface inside the Island is between 0 to -19 feet NGVD. The Island is within the jurisdiction of the Delta Protection Commission. The southern portion of the Island is partially flooded and under the jurisdiction of the California Department of Fish and Game. Sherman Island was flooded by a levee break in 1969.

Current Site Land Use: The current site land use is primarily agriculture with limited residential areas and also includes public and private recreational facilities.

Adjoining Land Use(s): To the north are Brannan and Twitchell Islands which are primarily agricultural with some recreation. To the south are Kimball and West Islands which are agricultural and wetland areas, and Donlan Island which is a flooded island with wildlife habitat. To the west are the Montezuma Hills, and to the east are Bradford and Jersey Islands.

Site Volume and Capacity: LTMS reports indicated that rehabilitation of all 19.5 miles of levees on the Island are estimated to require 1.8 million cubic yards (cy) of dredged material. An LTMS report also investigated locating a rehandling facility on the west side of the Island with an annual capacity of approximately 800,000 cy. Other dredged material stockpile areas including one on the east side of the Island near Gallagher Island are also under consideration by various parties.

Estimated Site Life: Actual project duration is dependent upon the project type, extent, and final plans. A rehandling facility would likely be planned for a 10 to 50 year operating life and a levee rehabilitation project would normally be planned for a 1 to 3 year operating life. There may be a long term need for small quantities of material for levee maintenance.

Physical Site Construction Requirements and Constraints: Construction requirements for a rehandling facility would include containment levees and interior dikes, a barge off-loading system, a dredged material discharge pipeline, an effluent control pond, and return water structures and related support and maintenance facilities. A levee rehabilitation project would require levee preparation, material placement, spreading and compaction and may also require surface and ground water monitoring. Shallow water depths in some areas may preclude direct barge access. Major power lines and gas mains crossing the Island may add significant constraints to the construction of facilities on or near these utilities.

Site References: Personal contact with Curt Schunutte of the California Department of Water Resources; LTMS, Investigation of Dredged Material Disposal Alternatives in the Sacramento/San Joaquin Delta for Sediments Dredged from San Francisco Bay, October 1990, by Ogden Beeman and Associates, et al. for USACOE, San Francisco District; LTMS Alternative Disposal Options, San Francisco Bay Region, Final Report, January 1992, by Ogden Beeman and Associates, et al., for USACOE, San Francisco District; Sacramento-San Joaquin Delta Atlas, California Department of Water Resources, 1993. Calif Quad Maps, Antioch North and Jersey Island; NOAA Chart 18661.

Additional Notes: USACOE, Sacramento District plans for deepening the Sacramento River Deep Water Ship Channel included possible placement of approximately 450,000 cubic yards of sandy dredged material in Sherman Island Lake for tidal and upland habitat creation via small island creation similar to previous activities at adjacent Donlan Island. This deepening project is currently on hold.

PLACEMENT SITE PROFILE

Site No:

Site Name:

Upper Suisun Bay Sites, Chipps Island and Winter Island

Site Category:

Proposed Re-use, Non-Tidal (Levee Rehabilitation)

Site Area:

The total area of Chipps Island is approximately 850 acres. The total area of Winter Island is approximately 453 acres.

Site Location:

Chipps Island is located in Suisun Bay northwest of the City of Pittsburg and south of Van Sickle Island in Solano County 38-03-30N, Long. 121-55-00W. Winter Island is located at the confluence of the Sacramento and San Joaquin Rivers and Suisun Bay, between Browns and Sherman Islands and northeast of the City of Pittsburg in Contra Costa County. Lat. 38-30N, Long. 121-51-00W.

Site Access:

Neither of these Islands has road or rail access. Water access to Chipps Island is via Suisun Bay and Spoonbill Creek. Water access to Winter Island is via Suisun Bay, New York and Middle Sloughs and the lower San Joaquin River. Both Islands have near shore areas with suitable water access for barges (-15 feet MLLW or more).

Site Description:

Chipps Island is a diked island with managed wetlands inside the dikes and tidal wetlands outside the dikes. This Island is within the Suisun Resource Conservation District and BCDC jurisdiction. The landowner has requested that the USACE assist in obtaining dredged material for levee rehabilitation on the southern part of the Island. Winter Island is also a diked island with managed wetlands inside the dikes and tidal wetlands outside the dikes. This Island's levees are maintained by Reclamation District 2122 and the Island is not within the jurisdiction of the Suisun Resource Conservation District or BCDC. This Island received dredged materials from the deepening of the John F. Baldwin and Stockton Ship Channels in the mid 1980's.

Current Site Land Use:

Both Islands consist primarily of managed wetlands within the dikes and tidal wetlands outside the dikes. Several buildings associated with a private club are located on the southern portion of Winter Island.

Adjoining Land Use(s):

Land uses to the north, west and east of both Chipps and Winter Islands are primarily managed and tidal wetlands. Land uses to the south of both Islands are residential, commercial, and industrial uses associated with the Pittsburg and Antioch areas and near shore areas of tidal wetlands.

Site Volume and Capacity:

The landowner estimated need for dredged material for levee rehabilitation on Chipps Island at approximately 2.0 million cubic yards. No estimated need for Winter Island was found in the references.

Estimated Site Life:

No estimated project duration for levee rehabilitation on Chipps or Winter Islands was found, however the duration would likely be several years. An irregular and ongoing need for levee maintenance materials on both Islands is likely.

Physical Site Construction Requirements and Constraints:

A levee rehabilitation project would require levee preparation and material placement, spreading and compaction, and possibly material stockpiling. Shallow water depths in some areas may preclude direct barge access.

Site References:

LTMS, Investigation of Dredged Material Disposal Alternatives in the Sacramento/San Joaquin Delta for Sediments Dredged from San Francisco Bay, October 1990, by Ogden Beeman and Associates, et al. for USACOE, San Francisco District; LTMS Alternative Disposal Options, San Francisco Bay Region, Final Report, January 1992, by Ogden Beeman and Associates, et al., for USACOE, San Francisco District; Sacramento-San Joaquin Delta Atlas, California Department of Water Resources, 1993. Calif. Quad Maps, Antioch North and Honker Bay, NOAA Chart 18656.

Additional Notes:

Many islands and diked areas in Suisun Bay and Suisun Marsh (within the Suisun Resource Conservation District) have ongoing needs for levee maintenance material and may be able to utilize dredged material for part or all of material needs.

PLACEMENT SITE PROFILE

Site No: 23

Site Name:	Other-Sacramento/ San Joaquin Delta Levee site-Twitchell Island Demo
Site Category:	Proposed Re-use, Non-Tidal (Levee Rehabilitation)
Site Area:	The total Island area is 3,516 acres.
Site Location:	Twitchell Island is located on the north bank of the San Joaquin River between river mile 15 and river mile 19, approximately 9 miles northeast of Antioch in Sacramento County. Lat. 38-06-30N, Long. 121-39-00W.
Site Access:	Road access to the site is via State Highway 160 and Twitchell Island Road. No rail access to Twitchell Island is available. Water access to Twitchell Island is via Suisun Bay, New York Slough and the San Joaquin River. The -35 foot MLLW Stockton Deep Water Ship Channel runs directly adjacent to the site.
Site Description:	Twitchell Island is a typical Delta island that is protected from flooding by levees. The levees protecting Twitchell Island are a combination of Federal flood control "project levees" and local flood control "non project levees". Levee maintenance activities on Twitchell Islands "non project levees" is performed by Reclamation District 1601. The land surface inside this Island is between 10 and 18 feet below sea level (-10 to -18 feet NGVD). Twitchell is within the jurisdiction of the recently formed Delta Protection Commission. The Department of Water Resources (DWR) has recently purchased a significant portion of the Island and provided funds for levee restoration through the Levee Subvention program. There is a current need for more material to restore levees on the Island especially the "project levee" along Threemile Slough. Saline material may require treatment prior to placing the material in the Delta.
Current Site Land Use:	The primary land use is agricultural production. Portions of the island currently owned by DWR may be temporarily fallow.
Adjoining Land Use(s):	Most of the islands adjacent to Twitchell Island are in agricultural production. Some islands have limited residential areas and recreational marinas.
Site Volume and Capacity:	Levee rehabilitation normally uses between 100,000 and 180,000 cubic yards per mile. Levee restoration along threemile Slough would likely require in excess of 300,000 cubic yards.
Estimated Site Life:	The duration of a particular project is dependent upon the site plan and other factors. In general, the 1,100 miles of Delta levees could require up to 100 million cubic yards of material in the next 10 years.
Physical Site Construction Requirements and Constraints:	The major construction requirements for levee rehabilitation sites is the ability to deliver suitable quality dredged material to within 100 to 200 feet of the levee project site. Water access in some areas may limit access to large barges. Significant environmental concerns exist relative to importing marine sediment into the fresh water and brackish water regions of the Delta.
Site References:	Personal contact with Curt Schmutte of California Department of Water Resources; LTMS Alternative Disposal Options, San Francisco Bay Region, Final Report, January 1992, by Ogden Beeman and Associates, et al., for USACOE, San Francisco District; Sacramento-San Joaquin Delta Atlas, California Department of Water Resources, 1993; Calif. Quad Maps, Jersey Island and Bouldin Island; NOAA Chart 18661.
Additional Notes:	Previous levee restoration projects on Twitchell Island partially utilized material that was removed from an area on Simmons Island. The material was originally dredged from the Suisun Bay Channel. Various testing to assess impacts from the imported material were done and may be done in the future.

PLACEMENT SITE PROFILE

Site No: _____

Site Name:

Mare Island Naval Shipyard

Site Category:

Proposed Re-use, Non-Tidal, and Confined Disposal

Site Area:

The total pond area is 510 acres.

Site Location:

Mare Island Naval Shipyard is located on the north side of Carquinez Strait between the Napa River and San Pablo Bay in City of Vallejo in Solano County. The dredged material disposal ponds are located on the west side of the Island. Lat. 38° 00N, Long. 122° 17-00W.

Site Access:

Road access to Mare Island is available directly from State Highway 37 and also from Tennessee Street in Vallejo. Rail access to the site is via military tracks which connect to Southern Pacific Railroad tracks in Vallejo. Water access to Mare Island is via San Pablo Bay, Carquinez Straits and Mare Island Strait. No direct water access is available from San Pablo Bay to the dredged material disposal ponds due to the shallow margins of San Pablo Bay.

Site Description:

The property proposed for the Mare Island Rehandling/Confined Disposal Facility consists of nine disposal areas which have been used by the Navy to accommodate the dredging materials from their berth front dredging program. The ponds are interconnected by spillways and culverts. There is a network of pipelines in place to accommodate the pumping of slurry from Mare Island Straits to the disposal ponds.

Current Site Land Use:

The only current use of these dredged material ponds is for the placement of dredged material from the berth front dredging program. The Mare Island facility is scheduled for base closure and the future use of the dredged material ponds may change depending on the future uses of this facility.

Adjoining Land Use(s):

Adjoining land uses include naval facilities, tidal wetlands, mud flats, and related habitat.

Site Volume and Capacity:

The estimated remaining pond capacity is approximately 2 million cubic yards. This capacity could be increased by increasing the levee heights. Currently the Navy has permits to dredge 600,000 cubic yards per year and normally dredges between 400,000 and 500,000 cubic yards per year. The remaining capacity of the southern pond used only for the US Coast Guard facility is approximately 200,000 cubic yards.

Estimated Site Life:

The current remaining life of these dredged material disposal ponds is approximately 4 years. With levee improvements the remaining life could be approximately 20 years. Material removal for reuse could also significantly extend the life of these dredged material ponds.

Physical Site Construction Requirements and Constraints:

The 8 active ponds currently have no construction requirements. The two inactive ponds could be brought back into service by levee improvement or by completing mitigation improvements. Future capacity expansion would require levee improvements and may require additional mitigation. Future dredged material disposal needs are dependent on base closure impacts and the converted use of the facility.

Site References:

Personal conversation with George Young of the Mare Island Staff Civil Engineering Office; Dredging and Disposal Road Map, Aug. 1993, SFBCDC and USACE; LTMS Alternative Disposal Options, San Francisco Bay Region, Final Report, by Ogden Beeman and Associates, et al., for USACOE, San Francisco District; Calif. Quad Map, Mare Island, NOAA Chart 18654. Personal conversation with Tom Gandesberry of the SFRWQCB.

Additional Notes:

The US Fish and Wildlife Service is interested in acquiring a portion of the existing tidal wetlands on Mare Island during the base closure process.

PLACEMENT SITE PROFILE

Site No: 25

Site Name: Pierce Island

Site Category: Existing Re-use, Non-Tidal

Site Area: The total area is approximately 74 acres. The area of the two dredged material disposal ponds are 34 acres. Upland habitat on historic dikes is approximately 17 acres and tidal wetland habitat is approximately 17 acres. Six acres are tule berms slightly s

Site Location: Pierce Island is located in Suisun Slough directly south of Suisun City in Solano County. Lat. 38-13-30N, Long. 122-02-00W.

Site Access: Pierce Island has no road or rail access. Water access is via Suisun Bay and the -8 foot MLLW Suisun Slough Channel.

Site Description: Pierce Island was used for sewage treatment ponds until the late 1960's. Suisun City then developed a mitigation and disposal plan for the Island to facilitate the Federal maintenance dredging of the Suisun Slough Channel. Two of the original ponds were retained for dredged material disposal and the remainder of the Island was divided between upland habitat and tidal wetland habitat.

Current Site Land Use: The current land use is dredged material disposal and upland and tidal wetland habitat.

Adjoining Land Use(s): The adjoining land use to the east and south is wildlife habitat in the Hill Slough Wildlife Preserve, to the north and west are commercial and residential areas of Suisun City, and to the southwest are tidal wetlands.

Site Volume and Capacity: The gross volume of the dredged material disposal ponds to within 2 feet of the dike crest is approximately 660,000 cubic yards. The total useable pond capacity is 620,000 to 640,000 cubic yards. In 1991 74,000 cubic yards (in situ) was placed in one of the ponds.

Estimated Site Life: The estimated site life of these ponds is 20 years if only material from the Federal maintenance dredging of Suisun Slough Channel is placed in the ponds. If additional material from the marina area north of the Island in Suisun City is also placed in the ponds, the estimated life would be reduced to approximately 15 years.

Physical Site Construction Requirements and Constraints: This site is currently permitted and operational and has no immediate construction requirements. Once the site reaches capacity, the dikes may require raising, however it is not known what ultimate dike height the foundation materials will support.

Site References: Personal conversation with Larch McNeill of the City of Suisun City, LTMS Alternative Disposal Options, San Francisco Bay Region, Final Report, January 1992, by Ogden Beeman and Associates, et al., for USACOE, San Francisco District; Calif. Quad Map, Fairfield South; NOAA Chart 18656.

Additional Notes: The City of Suisun City has the site permitted into perpetuity with the Corps of Engineers for local use only (no imported material) and with BCDC for approximately 30 years. Material from this site may be reused at Potrero Hills Sanitary Landfill for cover or by local duck clubs for levee maintenance material.

PLACEMENT SITE PROFILE

Site No:

Site Name:

San Leandro

Site Category:

Existing Re-use, Non-Tidal

Site Area:

The pond area is approximately 100 acres.

Site Location:

The dredged material ponds associated with the San Leandro Marina are located approximately 6,500 feet southeast of the San Leandro Marina, approximately 2,000 feet east of San Francisco Bay, within the City of San Leandro and Alameda County. Lat. 38-41-30N, Long. 122-10-00W.

Site Access:

Road access is from U.S. highway 880, Marina Blvd. and various surface streets and levee roads. The Southern Pacific Railroad tracks run directly east of the site. Direct water access to the site is very limited due to the shallow Bay margins in this area.

Site Description:

The site consists of dredged material ponds within a diked area of undeveloped land on the margins of San Francisco Bay. To the west of these ponds is a golf course, and to the south are seasonal and/or tidal wetlands. The ponds are provided to the City of San Leandro for the Federal maintenance of the San Leandro Marina Channels. The dredged material placed in these ponds is dried and removed from the site for reuse, usually as landfill cover. These ponds are dedicated to the exclusive use of San Leandro Channel and Marina dredging which occurs approximately every four years. Between cycles of use, these ponds are managed for wetland habitat under the terms of orders issued by the SFBRWQCB.

Current Site Land Use:

Dredged material drying ponds.

Adjoining Land Use(s):

Tidal and/or seasonal wetlands and residential, commercial, and recreational areas associated with the City of San Leandro.

Site Volume and Capacity:

The reported capacity of these ponds is approximately 500,000 cubic yards per processing cycle.

Estimated Site Life:

The site life is not limited as long as the dredged material continues to be removed.

Physical Site Construction Requirements and Constraints:

The site is currently constructed and active. The site does require periodic maintenance of dikes and related facilities as well as dried dredged material removal.

Site References:

Personal contact with Jim Haussener of San Leandro Marina; Beneficial Reuse and/or Nonaquatic Disposal for Dredged Material from San Francisco Bay, Stage III, Final Draft Report, by Mollatt & Nichol, Engineers for USACOE San Francisco District, May 1993; LTMS Alternative Disposal Options, San Francisco Bay Region, Final Report, January 1992, by Ogden Beeman and Associates, et al., for USACOE, San Francisco District; Dredging and Disposal Road Map Aug 1993 SFBCDC and USACE; Calif. Quad Map, San Leandro, NOAA Chart 18651.

Additional Notes:

PLACEMENT SITE PROFILE

Site No: 27

Site Name: Petaluma River Drying Ponds

Site Category: Existing Re-use, Non-Tidal

Site Area: The total site area is 210 acres. During initial site permitting in 1975, 45 acres of the site north of Adobe Creek was dedicated to mitigation. Of the remaining 165 acres, approximately 140 acres is currently dredged material ponds.

Site Location: These ponds are located on the east side of the Petaluma River, directly south of Adobe Creek, approximately 1 mile south east of the Junction of US Highway 101 and Lakeville Highway. Lat. 38-13-30N, Long. 122-36-00W.

Site Access: Road access to the site is via US Highway 101, Lakeville Highway, McDowell Blvd. and Cypress Drive. There is no direct rail access to the site. The Southern Pacific Railroad tracks are located directly across the Petaluma River from the site. Water access to the site is via San Pablo Bay and the -8 foot MLLW Petaluma River Channel.

Site Description: The site is owned by the City of Petaluma and consists of diked ponds currently used exclusively for dredged material from Federal maintenance dredging of the Petaluma River Channel. These ponds were permitted for use in 1975. The City of Petaluma is currently in the process of re-permitting the site. Apparently several agencies including BCDC have recently inquired about the availability of the site for dredged material from other projects. The City of Petaluma indicated that they would require some type of binding assurance that other activities at the site would not adversely effect Federal maintenance dredging activities for the Petaluma River Channel prior to allowing any other use of the site. Currently, dried dredged material from these ponds is excavated and hauled to Redwood sanitary Landfill for use as cover or liner material. The City of Petaluma indicated that they would like to continue this practice to extend the life of the ponds.

Current Site Land Use: Current site uses include dredged material storage ponds and associated activities. Areas of the site outside the ponds may contain seasonal or tidal wetlands and related habitat. The City of Petaluma is considering opening the site for public uses such as a passive park, wildlife viewing and fishing access.

Adjoining Land Use(s): Adjoining land uses include agricultural production and limited commercial and light industrial activity.

Site Volume and Capacity: The pond capacity varies depending upon the amount of dredged material placement and removal. Dredging projects since 1975 have varied from 108,700 to 444,000 cubic yards.

Estimated Site Life: If the current reuse practices continue the sites life would only be limited by permitting constraints.

Physical Site Construction Requirements and Constraints: The site is currently constructed and operational. Maintenance of dikes, return water facilities and related activities is required occasionally. The use of this facility by other dredging projects may be constrained by the site's throughput capacity and demand for dried dredged material as well as permitting and institutional constraints. Only relatively small barges could navigate the Petaluma River Channel up to the site due to water depths.

Site References: Personal contact with Tom Hargis, Director of Engineering for the City of Petaluma; Beneficial Reuse and/or Nonaquatic Disposal for Dredged Material from San Francisco Bay, Stage III, Final Draft Report, by Moffatt & Nichol, Engineers for USACOE San Francisco District, May 1993; Calif Quad. Map, Petaluma River, NOAA Chart 18654.

Additional Notes: The City of Petaluma is currently negotiating to re-permit the 140 acre site. If the current negotiations are not successful up to 65 acres of the 140 acre site will have to be dedicated to open space, including fish and wildlife habitat.