

San Francisco Delta Long-Term Management Strategy (LTMS) Database Development Letter Report

October 2, 2006

Overview

This letter report summarizes the preliminary activities of Exa Data and Mapping Services (Exa) for developing a database and documentation for the Delta LTMS project for the U.S. Army Corps of Engineers, San Francisco District (COE-SFD) through Anchor Environmental, LLC (Anchor). This report fulfills the requirements for Task 1 of the Delta LTMS project (Anchor Project Number 060076-02, Task 3), except for travel costs as none were incurred. The travel costs will be used for a trip to San Francisco to meet with the LTMS group at some point in the future.

Kickoff Meeting

A discussion was held between Exa and the COE-SFD on August 11, 2006 on the overall project goals. Participants included Peggy Myre (Exa), Bill Brostoff, and Jessie Burton Evans (COE-SFD). Further communication has been conducted during the following period, including contractual discussions and the initiation of a contact list and data inventory. During the kickoff discussions, the overall goals of the database for the project were discussed. Although some preliminary data types and sources were identified, it is one primary goal of the project to enlist the feedback from LTMS stakeholders to provide information on studies conducted in the Delta that include sediment chemistry, toxicity, tissue bioaccumulation, water quality and nutrients, and other related environmental data. The data sources discussed at the Kickoff meeting included:

- CDs from the COE-Sacramento district (COE-SAC) containing dredging-related data, a copy of the CDs were transmitted to Exa;
- The DREDGE database, containing sediment quality data from prior to 2001.

A copy of a contact list developed by Jessie was provided to Exa as a starting place to develop leads on data sources in the Delta. The definition of the study area was discussed, and will include Suisun Bay. The San Francisco Bay-Delta boundary may be deemed to be the boundary designated by the BCDC, but this will be formally discussed at a later date.

Preliminary Work Completed

Meeting Support – Two sets of Powerpoint slides, detailing the scope of the database tasks, the general approach for compiling the database, and the current status of the project, were delivered to Anchor and the COE-SFD, most recently for the LTMS meeting held 9/28/2006.

Contact List – As of this Letter Report, the following agencies have been contacted and/or data sources investigated, with some feedback obtained that have been included in the data inventory: CA Department of Water Resources (DWR); CalFed Bay-Delta Program; Central Valley Regional Water Quality Control Board (CVRWQCB); Port of Stockton; SFEI; USGS.

Data Inventory – A data inventory list has been started and excerpted below. It is organized on a study-by-study basis. Currently, only the basic information on the study is being collected, including a Study Name, the source agency, the year of sampling, any publication information, the data types available, and the format of the data. Following review and

supplemental additions by the LTMS, a prioritization scheme will be developed, and then data gaps identified. Currently the list includes studies from COE-SAC, from the BDAT (Bay Delta and Tributaries) website maintained by DWR; the DREDGE database (pre-2001 data), and a few studies listed from development of contacts (Table 1).

Table 1. Current Preliminary Study List

Preliminary Study Name	Agency	Year	Source
Sacramento DWSC	USACE, SAC	2003	USACE, SAC
Stockton Channel Maintenance	USACE, SAC	2003	USACE, SAC
Stockton Deep Water Ship Channel	USACE, SAC	2004	USACE, SAC
Stockton River	USACE, SAC	2005	USACE, SAC
Bay Delta Hydrodynamics Program	USGS	Mult	BDAT: Bay Delta & Tributaries
CA NWIS II water quality data	USGS	Mult	BDAT: Bay Delta & Tributaries
CALFED Mercury Transport, Cycling and Fate Study	CRWQCV Reg 5	Mult	BDAT: Bay Delta & Tributaries
California Data Exchange Center	DWR	Mult	BDAT: Bay Delta & Tributaries
Environmental Monitoring Program	DWR	Mult	BDAT: Bay Delta & Tributaries
Fall Midwater Trawl	DFG	Mult	BDAT: Bay Delta & Tributaries
Feather River Salmon Emigration Study	DWR	Mult	BDAT: Bay Delta & Tributaries
Fish Facility Monitoring	DFG	Mult	BDAT: Bay Delta & Tributaries
Glenn-Colusa Irrigation District Studies	DFG	Mult	BDAT: Bay Delta & Tributaries
Mokelumne River Salmon and Steelhead Monitoring	EBMUD	Mult	BDAT: Bay Delta & Tributaries
Municipal Water Quality Investigations Program	DWR	Mult	BDAT: Bay Delta & Tributaries
Operation and Maintenance SCADA Data	DWR	Mult	BDAT: Bay Delta & Tributaries
Red Bluff Office, Juvenile Salmon Monitoring	DFG	Mult	BDAT: Bay Delta & Tributaries
Sacramento River Watershed Project (Sacramento River Watershed Project)	NA	Mult	BDAT: Bay Delta & Tributaries
San Francisco Bay Studies	DFG	Mult	BDAT: Bay Delta & Tributaries
San Joaquin River Dissolved Oxygen	Multiple	Mult	BDAT: Bay Delta & Tributaries
Stanislaus River Emigration Study (S.P. Cramer)	SP Cramer	Mult	BDAT: Bay Delta & Tributaries
Stockton Office, Juvenile Salmon Monitoring	USFWS	Mult	BDAT: Bay Delta & Tributaries
Suisun Marsh Fisheries Monitoring	UCD	Mult	BDAT: Bay Delta & Tributaries
Suisun Marsh Monitoring Program	DWR	Mult	BDAT: Bay Delta & Tributaries
Summer Townet Survey	DFG	Mult	BDAT: Bay Delta & Tributaries
Surface Water Ambient Monitoring Program (SWAMP)	SWRCB	Mult	BDAT: Bay Delta & Tributaries
Tuolumne & Merced River Monitoring Program	DFG	Mult	BDAT: Bay Delta & Tributaries
USGS Delta RIM Hydrology Monitoring	USGS	Mult	BDAT: Bay Delta & Tributaries
Water and Aquatic Habitat Conservation Branch	DFG	Mult	BDAT: Bay Delta & Tributaries
Yolo Bypass Study	DWR	Mult	BDAT: Bay Delta & Tributaries
Harbor marina project; baseline water and sediment evaluation II for open water placement of dredged material	R.B. Krone	1990	DREDGE Database
Env. Study for Interim S. Delta Program; Water, Sediment, and Soil Quality	DWR	1994	DREDGE Database
Stockton Ship Channel mile 41-39.18; Report of Waste Discharge	Army Corps of Engineers	1994	DREDGE Database
Cumulative Monitoring Report; Shaded Riverine Aquatic Habitat Restoration Project	DWR	1996	DREDGE Database
Harbor marina project; baseline water and sediment evaluation for open water placement of dredged material	Kurt Kline, MEC Analytical Systems	1990	DREDGE Database
Notice of Intent; Attachment B Application Requirement Stockton deep water Ship Channel Maintenance Dredging	COE	1998	DREDGE Database

Table 1, cont. Current Preliminary Study List

Preliminary Study Name	Agency	Year	Source
Report of Waste Discharge; Sacramento Deep Water Ship Channel Maintenance Dredging Attachment B Application requirements	COE	1995	DREDGE Database
;			DREDGE Database
Report of Waste Discharge; Stockton Deep Water Ship Channel Maintenance Dredging. Attachment B Application Requirements	COE	1995	DREDGE Database
Notice of Intent; Attachment B Application Requirements. Stockton Deep Water Ship Channel Maintenance Dredging Mile 5.5 to 39.0	COE	1997	DREDGE Database
Notice of Intent; Report of Pre-dredge Testing Sacramento Deep Water Ship Channel mile 5.36 to 8.75	Kinetics Laboratory Inc.	1998	DREDGE Database
Pre-dredge Sediment Program; San Joaquin Deep Water Ship Channel Dredging project Sept. 1996	COE	1996	DREDGE Database
Post Dredging Notice; Sacramento Deep Water Ship Channel Emergency Dredging River Mile 8.7 to 10.6 near Rio Vista	COE	1998	DREDGE Database
Post Dredging Notice; 1997 Emergency Dredging Stockton Deep Water Ship Channel Mile 39.18-40.10	COE	1997	DREDGE Database
Harbor Marina Project; Sediment sampling and Chemical Analysis	J. Raney, M. Geneghty	1988	DREDGE Database
South Delta improvements Program; Environmental Study of Dredged Materials Grant line Canal	DWR	2000	DREDGE Database
Lost Isle Harbor; Waiver of Waste Discharge Requirements for the Dredging and Disposal of Material from Acker Island, Lost Isle Harbor, San Joaquin Co.	Toxscan lab	1998	DREDGE Database
Sediment Sampling Report; Pre Dredge Sediment Sampling, Village West Marina Basin	Gilbert Labrie	1999	DREDGE Database
Lauritzen Marina; Water Quality Certification-Lauritzen Marina Antioch-Contra Costa County	Aquifer Sciences Inc.	1992	DREDGE Database
New Bridge Marina; Water Quality Certification for Dredging and Disposal of Dreged Sediments- New Bridge Marina, San Joaquin River, Contra Costa Co.	Salt River Construction	1995	DREDGE Database
Kie-Con Barge Landing; Kie-Con Varge Landing in Antioch, Ca.- Water Quality Certification	Aquifer Sciences Inc.	1997	DREDGE Database
Lauritzen Marina; Results of Marina Sediment Sampling Lauritzen Marina, Contra Costa County, Antioch Ca.	Jonathan Tschritter-Dupont	1997	DREDGE Database
Tyler Island; Sediment Sampling Report-Reclamation District 563-Tyler Island	William Darsie	1999	DREDGE Database
North Delta Program; Environmental study for the Interim North Delta Program	Department of Water Resources	1995	DREDGE Database
South Delta Program; Water and Sediment Quality study for the Interim South Delta Program	Department of Water Resources	1995	DREDGE Database
North Delta Program; North Delta Program (draft) Environmental Impact Report and Statement	Pace Laboratories	1990	DREDGE Database
Suisun Channel; Chemical Analysis of Sediments at Suisun Bay Channel and New York Slough for 1994 Maintenance Dredging-Draft Report	Toxscan Inc., Kinnetic Laboratories Inc.	1994	DREDGE Database
Suisun Bay Channel; Chemical Analysis of sediments from Suisun Bay Channel FY 1998 Maintenance Dredging, June 1998	USACOE	1998	DREDGE Database
Suisun Bay/New York Slough; Physical and Chemical Analysis and Ca Title 22 WET Analysis of Sediments from Suisun Bay Channel and New York Slough FY 1999 maintenance dredging, June 1999	USACOE	1999	DREDGE Database

Table 1, cont. Current Preliminary Study List

Preliminary Study Name	Agency	Year	Source
McMullin Tract; San Joaquin River Water Users Co. Intake Channel Dredging-San Joaquin R.	FGL Environmental	1994	DREDGE Database
Oxbow Marina; Results of Chemical and Physical Testing of Sediments from the Oxbow Marina Isleton, Ca.	DCC Engineering Co. Inc.	1994	DREDGE Database
Orwood Marina; WQC- Maintenance Dredging-Orwood Resort Marina-Brentwood, Contra Costa Co.	Cerco Analytical	1997	DREDGE Database
Bethel Island; Bethel Island Maintenance Dredging, Sandmound and Piper Sloughs, San Joaquin Co.	Wes Anderson	1990	DREDGE Database
Bethel Island; Bethel Island Maintenance Dredging, Sandmound and Piper Sloughs, San Joaquin Co.	Aquifer Sciences Inc.	1994	DREDGE Database
Tyler Island; Request for Water Quality Certification Reclamation District No. 563	Kjeldsen, Sinnock and Neudeck	1997	DREDGE Database
Antioch Marina; Waiver of Waste Discharge Requirements for Dredging and Disposal of Dredged material from Antioch Municipal Marina	City of Antioch	1997	DREDGE Database
Mormon Channel; Results of Sediment Testing Stockton Property-Mormon Channel	MEC Analytical Systems Inc.	1993	DREDGE Database
Sugar Barge Marina; Water Quality Certification-Sugar Barge Marina, Contra Costa Co.	Aquifer Sciences Inc.	1996	DREDGE Database
Pirates Lair; Waiver of Waste Discharge Requirements PG&E Contra Costa; Results of Chemical and Physical Testing at the Contra Costa Power Plant, PG&E	Advanced Biological Testing Inc.	1997	DREDGE Database
Stockton Sailing Club; Water Quality Certification-Stockton Sailing Club Berthing Area Maintenance Dredging	MEC Analytical Systems Inc.	1997	DREDGE Database
Stockton Sailing Club; Water Quality Certification-Stockton Sailing Club Berthing Area Maintenance Dredging	Eric J. Usher	1995	DREDGE Database
Sacramento Deep Water Ship Channel; Sacramento Deep Water Ship Channel Maintenance Dredging mile 29.5 to 35	COE	1997	DREDGE Database
Sacramento Deep Water Ship Channel; Notice of Intent Sacramento Deep Water Ship Channel Maintenance Dredging Mile 7.23 to 12.88	COE	1999	DREDGE Database
Stockton Deep Water Ship Channel; Notice of Intent Attachment B Application Requirements Mile 5.45-40	COE	1999	DREDGE Database
San Joaquin River; Chemical Analysis of Sediments at San Joaquin River for FY 1995 Maintenance Dredging	Toxscan, Inc/ Kinnetic Laboratories, Inc.	1995	DREDGE Database
Sacramento Deep Water Ship Channel; Analysis and summary of Water Quality Testing Results		1986	DREDGE Database
Old River; Environmental Study of Dredged Materials in Old River	Richard Sapudar, Ian Waters	1997	DREDGE Database
Sacramento Deep Water Ship Channel; Report of Pre-Dredge Sediment Testing-Sacramento River Maintenance Dredging Project River mile 6.31-12.88 and 33.33-37.69	Toxscan Inc.	2000	DREDGE Database
Stockton Deep Water Ship Channel; Notice of Intent Attachment B Application Requirements-Maintenance Dredging mile 9 to 40	Toxscan Inc.	2000	DREDGE Database
Korth's Pirates Lair; Maintenance Dredging - Korth's Pirates Lair Marina	Pace Laboratories Inc.	1989	DREDGE Database
DELS HARBOR; DELS HARBOR MARINA	RICH BRUER	2000	DREDGE Database
Old Middle River; raw data	Chris Huitt	1999	DREDGE Database
Delta Toxicity Study; Bay Protection and Toxic Cleanup Program	SWRCB and DFG	1997	DREDGE Database

Table 1, cont. Current Preliminary Study List

Preliminary Study Name	Agency	Year	Source
Benthic Boogie	DWR/USGS	NA	Contact list
Sediment Yield of the Sacramento River, 1957-2001	USGS	2004	Contact list
Sediment budgets at the interface between rivers	USGS	2005	Contact list
San Francisco Bay: The Ecosystem of San Francisco; AAAS, 1996 (Hollibaugh, JT, ed)		1996	Contact list
Estimates of suspended sediment flux entering San Fran Bay from the Sacramento and San Joaquin Delta. SPLWG of the RMP.	RMP	2002	Contact list
Sediment dynamics drive contaminant dynamics	USGS/RMP	2003	Contact list