# APPENDIX H
# OPPORTUNITIES FOR BENEFICIAL USE OF DREDGED MATERIAL REPORT (2010)

# DRAFT FINAL

# SEDIMENT STOCKPILE AND BENEFICIAL REUSE SITES FOR THE SACRAMENTO RIVER DEEP WATER SHIP CHANNEL

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*Submitted to:*

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# 1. INTRODUCTION

The United States Army Corps of Engineers (USACE) is planning a project to deepen the Sacramento River Deep Water Ship Channel (Sacramento DWSC). The currently maintained depth of the Sacramento DWSC is 30 feet below mean low low water (MLLW). The proposed project anticipates deepening the Sacramento DWSC to 35 feet below MLLW and generating approximately 7 million cubic yards of sediment. This report presents information describing the various existing and potential sites for placing these sediments and identifies areas where these sediments may be subsequently beneficially reused. Figure 1 shows the delta and both DWSCs.

Alternative approaches to deepening the Sacramento DWSC will be developed and evaluated within the framework provided by the National Environmental Protection Act (NEPA) and the California Environmental Quality Act (CEQA). The purpose of the information reported here is to help the USACE address the deepening project objective to "facilitate beneficial use of dredged materials by providing them to local projects." This report provides the basic building blocks needed to create alternatives to both placing sediments dredged from the Sacramento DWSC and subsequently reusing these same sediments within the California Delta.

The basic types of information provided here consist of the following:

- Location and estimated capacity of existing and potential sediment stockpile sites,
- Location and estimated volume of sediment that could be reused to support a project,
- Engineering constraints associated with the identified stockpile and reuse sites (e.g., estimated order of magnitude costs, site accessibility, etc.),
- General permitting requirements and approvals potentially related to the stockpile and reuse sites.

While the information presented here is considered reliable, it has been derived entirely from existing information sources and interviews. The identified stockpile and reuse sites have not yet undergone a rigorous environmental evaluation, engineering analysis, nor validated in the field. Consequently, the feasibility of alternatives comprising these stockpile and reuse alternatives will require additional detailed evaluations of potential environmental impacts, engineering constraints, cost, ability to permit, and land owner acceptance.

# 2. PROJECT BACKGROUND

## 2.1 California Delta

The Delta consists of more than 100 islands and tracts, more than 1,100 miles of levees, and covers more than 1,100 square miles. Most of the islands and tracts are actively managed by a local Reclamation District (RD). The Delta includes the two inland ports at Sacramento and Stockton, along with the more than 100 marinas scattered along its winding waterways. The Delta covers five California counties (Contra Costa, San Joaquin, Sacramento, Solano, and Yolo) and includes more than 25 towns within or adjacent to its border. There are two DWSCs in the Delta. The Sacramento River DWSC leads to the Port of Sacramento and is the focus of this report. The Stockton DWSC follows the San Joaquin River, which is covered in a separate report.

The USACE annually maintains the DWSC leading to the Port of West Sacramento at a depth of –30 feet MLLW and the project to deepen the DWSC is anticipated to generate approximately 10 million cubic yards of sediment. The USACE also annually maintains the DWSC leading to the Port of Stockton at a depth of –35 feet MLLW and the project to deepen the DWSC is anticipated to generate approximately 30 million cubic yards of sediment. The amount of sediment anticipated to be generated by the deepening of both DWSCs may exceed the capacity currently available in the existing dredged sediment stockpile sites along the DWSC. Consequently, the proposed deepening projects Sacramento DWSC will require additional opportunities to be identified that can stockpile and/or beneficially reuse the dredged sediments, which is the purpose of the information presented here.

The California Department of Water Resources and USACE are currently evaluating the Delta levee system and substantial improvements are anticipated that would demand most, if not more than, the amount of sediment that will be generated by the deepening. Furthermore, annual maintenance of these deeper channels is likely to generate more sediment than the current annual DWSC maintenance activities. Based on information from the Ports of Stockton and Sacramento, there are presently millions of cubic yards of dredged sediment stockpiled along the banks of the Sacramento and San Joaquin Rivers that could be beneficially reused. Considering the demand for fill material to improve levees along with the supply of material from both existing stockpiles and future dredging provides an opportunity to coordinate the dredging and stockpiling of sediments with their potential beneficial reuse.

## 2.2 Managing Dredged Sediment

Hydraulic dredging is the assumed method that will be employed to deepen the DWSCs. Hydraulic dredging discharges substantially more water than sediment, which allows the sediment to be conveyed via pipeline from the riverbed to a distant receiving site without double handling, but also requires careful planning to manage the water. Based on experience and discussions with Mr.

Randy Steed at the Ross Island Sand and Gravel Company, the discharge from hydraulic dredging equipment to stockpile sites within 20,000 feet is approximately 90% water, and approximately 95% water when pumped greater distances. Therefore, if the 10 million cubic yards are dredged and discharged within 20,000 feet of the DWSC, approximately 100 million cubic yards of sediment and water will be discharged to Stockpile sites. The types of sites that can be engineered and permitted to receive dredged sediments are described in Section 4.

Beginning in 2005, the Regional Board stopped allowing the return of dredged water to the river without their prior approval. The Regional Board has expressed significant concerns regarding the quality of dredged water and particularly the potential for this water to contain significant concentrations methylmercury. More recently, the Regional Board has indicated a willingness to consider returning dredged water soon after discharge to an upland location to reduce the potential for forming methylmercury, assuming the water is adequately tested and meets specific criteria. Therefore, due the ongoing uncertainty regarding the return of dredged water, the evaluation of Stockpile site capacity here assumes that none of the water accompanying the sediment dredged and discharged to the Stockpile site will be returned directly to the river.

# 3. COLLECTION OF INFORMATION

This section describes the methods employed to collect the information needed to implement the scope of work described in the proposed scope (AWR, 2009). The proposed scope of work was developed based on the USACE request for proposal (USACE, 2009). During the implementation of this study, the scope of work underwent some nominal changes in response to findings, communications with USACE, and a discussion on February 22, 2010 with Mr. Brian Ross representing the United States Environmental Protection Agency (USEPA) and Mssrs. Victor Izzo and Phil Giovanini representing the Central Valley Regional Water Quality Control Board (Regional Board). The methods employed to interpret the collected information are provided within the subsequent sections of this report.

## 3.1 Boundary of the Study Area

Figure 1 divides the Delta into three study areas: northern area associated solely with the Sacramento DWSC, southern area associated solely with the Stockton DWSC, and the central area associated with both DWSCs. The information collected and evaluated here focuses on that portion of the Delta generally associated with the Sacramento DWSC, which are the northern and central areas of the Delta. These areas were derived by:

- Dividing the Delta into approximately equal portions for the Sacramento and Stockton DWSCs, with an area of overlap in the central Delta,
- Allowing the boundary of the study's central Delta area, which is common to both the Sacramento and Stockton DWSCs, to be approximately equidistant from the DWSCs,

- Following the legal boundary of the Delta's primary and secondary zones,
- Increasing the area to include all areas within 15,000 feet of the DWSCs,
- Following the island boundaries so that the study areas do not cut across islands.

The entire study area is approximately 1,237 square miles, which includes the entire Delta, plus areas within approximately 15,000 feet of the DWSCs. The Sacramento DWSC study area covers approximately 700 square miles and the Stockton DWSC study area covers approximately is 825 square miles. The central area that is common to both the Sacramento and Stockton DWSCs covers approximately 288 square miles.

## 3.2 Types of Information

### 3.2.1 Geographical Information System (GIS) and Mapped Data

GIS provides several critical elements for this project:

- Data for base maps of the region,
- Locations of existing and potential stockpile and reuse sites,
- Environmental and infrastructure constraints that limit opportunities to develop a site,
- Evaluate and cartographically present the above information.

Datasets include such features as transportation, hydrography, infrastructure, topography, bathymetry, land use, land cover, wildlife areas, open space, crops, boundaries, and jurisdictions. Special attention was paid to obtaining information on attributes that might preclude or limit the use of an area for stockpiling dredged material. For example, wetlands, urban areas, and orchards are unsuitable for stockpiling dredged materials.

Georeferenced aerial photography and USGS topographic maps were used in the GIS to evaluate the accuracy of GIS features. For example, alignments of electric powerlines acquired from the California Energy Commission clearly deviated by several hundred feet from the towers and powerlines clearly visible on the aerial photographs and topographic maps. Also, aerial images were used to evaluate the accuracy of road placement (e.g., GIS layers that located roads in the middle of sloughs were considered unreliable). Many data sets were eliminated based on those types of comparisons. To a small extent, printed maps and small images of web maps were also acquired simply as checks against the information shown in GIS layers.

### 3.2.2 Potential Stockpile and Reuse Sites

Finding potential stockpile and reuse sites relied upon interviews with Reclamation Districts and their engineers and with representatives from various organizations. Several classes of organizations were consulted: corporate, educational institutions, city governments, county governments, federal government entities, special governmental districts and entities, state government, and non-governmental organizations (NGOs). Corporations were contacted only when identified by a government representative as a potential source of relevant information. In general, the representatives of all the organizations contacted were cooperative, showed interest, contacted their colleagues for additional input, and recommended others for us to contact, often in different organizations.

Once the organization expressed that they likely had a possible stockpile or reuse site, AWR would solicit a map showing the site(s) and estimates of the amounts they might use over the next several years. Usually after a little prodding, serious potential users would provide the desired information to be digitized into the GIS. In the case of the RDs, we usually met with the engineer with a set of topographic maps and they hand plotted the desired information in the meeting. The site data was subsequently digitized by AWR and the quantities of dredge materials to be used were put into the attribute tables.

## 3.3 Sources of Information

During November 2009 through March 2010, the information listed below was collected from the different sources to identify opportunities to stockpile and reuse sediment proposed to be dredged from the DWSC.

**Table 2 : Sources of Information**

| Source of Information | Types of Data Obtained | Information identified sites for: | | |
|---|---|---|---|---|
| | | Existing Stockpile | Potential Stockpile | Potential Reuse |
| Historic dredging information from government agencies and ports | Maps and GIS files | ✓ | -- | -- |
| Reclamation District and/or engineer | Interview Notes and Maps | ✓ | ✓ | ✓ |
| Government agencies, developers, and commercial fill suppliers, and owner/operators of dredged sediment stockpiles | Interview Notes and Maps | ✓ | ✓ | ✓ |
| Land use data from government agencies and other organizations | GIS files | -- | ✓ | ✓ |

### 3.3.1 Reclamation Districts

Information was collected from persons representing 39 of the 55 RDs located in the study area for the Sacramento DWSC, as listed on Table 1 and shown on Figure 2. These interviews were first focused on identifying those potential stockpile sites most likely to be approved by the landowner and to be located near potential reuse sties. The interviews then identified all anticipated projects that could reuse dredged sediments within the RD along with an estimated volume that the reuse site could consume. Additional information was also requested describing the more critical constraints to developing stockpile sites on the island, geotechnical characteristics required of dredged sediments in reuse projects, and their order-of-magnitude estimates to design and construct sites to accept sediment stockpiles. These sites were located and hand drawn on USGS base maps created for each RD. Each identified potential stockpile and reuse area was then digitized in GIS and attributed with purpose, capacity, location, area, and source data information. This information is also compiled, as appropriate, into tables and figures identifying stockpile and reuse sites.

### 3.3.2 Other Organizations

As described above, there are several categories of other organizations that were consulted to obtain information about potential stockpile and reuse sites. The individual organizations are listed in Table 3. The detailed accounts of the interview contacts, steps, and feedback received are provided in Appendix A, USACE Dredging Contact List.

Additional information was requested to develop order-of-magnitude unit costs to place, transport, and reuse dredged sediment. This information was obtained in discussions with trucking companies, dredging companies, and barge companies, as identified in Section 6.

### 3.3.3 GIS Data Sources

GIS files were located through extensive consultation of data portals and agency and organization web sites, telephone interviews, emails, and private data sets. Over 1,000 GIS datasets were collected from local, state and federal agencies, and private organizations covering the Sacramento Delta Region. The sources of GIS files are:

- Anchor Environmental
- Bureau of Land Management
- California Department of Fish and Game (CDFG)
- California Department of Transportation (Caltrans)
- California Department of Water Resources (DWR)
- California Division of Oil and Gas (DOGGR)
- California Energy Commission
- California Farmland Mapping Program

- California Spatial Information Library (CASIL)
- County Agricultural Commissioners
- Delta Vision
- Earth Sciences Research Institute (ESRI)
- Federal Emergency Management Agency (FEMA)
- Great Circle Information Services
- National Oceanic and Atmospheric Administration (NOAA)
- Port of Stockton
- Sacramento County
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Geological Survey (USGS)
- Yolo County
- Datasets provided by USACE and its contractors

The files analyzed for this project are listed by source and type in Appendix B, GIS Data Files Reviewed for Project Relevance.

## 3.4 GIS Data Quality Assessment and Selection

The process of evaluating and selecting between GIS datasets is a time consuming and meticulous process. Dataset deficiencies manifest themselves by comparing similar datasets from different sources. This evaluation revealed datasets to be inconsistent, incomplete, and/or inaccurate possibly because they were outdated, while other datasets were found to be accurate, current, and complete. Datasets differed in coordinate systems and were re-projected to UTM 10N NAD 83, the standard used by USACE.

More than 2,500 electronic files (e.g. GIS files) were obtained from government agencies and private sources and are listed in Appendix B. In all cases, the information obtained was first reviewed, clarified in follow up communications (if necessary), and evaluated for relevancy and accuracy. QA/QC was required to identify those datasets with the most appropriate level of detail and adequate accuracy as required for this project. Below are the steps taken to evaluate the data:

- Compared related datasets to one another to ascertain completeness of coverage, and consistency to each other,
- Compared datasets to USGS digital raster graphics (topographic maps) and aerial imagery to evaluate the accuracy of GIS features,
- Looked for differences in boundaries, level of detail, missing segments, and completeness of attributes and metadata.

Evaluations of accuracy involved direct comparison with established reference materials, such as maps produced by the United States Geological Service (USGS) and the California Department of

Water Resources, current compilations of similar data, and current aerial photographs. In many cases, the supplied information was found to be duplicative, inaccurate, or out of date, and consequently was not further utilized. Information considered accurate and reliable and without duplication was further interpreted, utilized to meet the purpose of this study, and is displayed on Figures 3, 4, and 5 identifying stockpile and reuse sites.

Approximately 50 Datasets were selected to be utilized in this project and were imported into an Spatial Data Standards, Facilities, Infrastructure, and Environment (SDSFIE) compliant geodatabase. An empty shell consisting of SDSFIE Entity Types and Classes was initially created using the SDSFIE Geodatabase builder. SDSFIE browser provides definitions of each Entity Class, which helped identify which Feature Class would be appropriate for each dataset. ArcCatalog was used to import each shapefile one-by-one using the import feature class option. Data fields within the source files were matched to the appropriate SDSFIE field names.

Thus each dataset was sorted, reviewed, compared with similar datasets, and analyzed for completeness and accuracy. Selected datasets were moved into the final SDSFIE-compliant geodatabase of about 50 feature classes and projected to the UTM 10N NAD 83 coordinate system.

# 4. IDENTIFICATION OF STOCKPILE SITES

Until approximately 2007, facilities in the Delta receiving dredged sediments were routinely referred to as “disposal” sites. This designation was largely due to convention and was consistent with the Regional Board’s view of dredged sediments as a waste posing potential risks to water quality and the environment.

Nonetheless, it was an acceptable practice until approximately 2003 to discharge sediments dredged into existing “disposal” sites located along the DWSCs during the fall and winter months and to then sell those sediments in the spring and summer months as fill materials for reuse elsewhere within and near the Delta. This practice allowed sufficient capacity to be made available in time for the annual maintenance dredging of the DWSCs. However, with the current requirements imposed by the Regional Board on reusing dredged sediments, the available capacity in the stockpile sites is diminishing while the need for inexpensive local material is increasing.

In the last several years, studies and monitoring of sediment and water quality performed with oversight from the Regional Board have demonstrated that the sediments dredged from the DWSCs are unlikely to pose a significant risk to human health and the environment (ERS, 2009). Based on these studies, the Regional Board has issued Notices of Approval (NOAs) allowing the reuse of more than 2 million cubic yards of dredged sediment. While approval to place and reuse dredged sediments are first required to be obtained from the Regional Board, these “disposal” sites effectively function as stockpiles of dredged sediment that can be made available for reuse. Consequently, the terminology has shifted over time from dredged sediment “disposal” sites to dredged sediment “stockpile” sites.

## 4.1 Types of Stockpile Sites

Stockpiles are facilities that are designed to directly receive dredged sediments and the accompanying water. These facilities are managed over several months to dewater the sediments enough to enable transportation of the sediments via truck or barge for subsequent beneficial reuse. The information collected and presented describes three general types of dredged sediment stockpile sites, which are described below.

### 4.1.1 Existing Stockpile Sites

Existing stockpile sites have been developed and maintained by the Ports of West Sacramento and Stockton and by DWR. These sites are routinely used every year to receive sediments dredged as part of USACE's maintenance of the DWSC.

The location and boundaries of these existing dredged sediment stockpile sites were obtained directly from high quality GIS maps provided by USACE and/or its contractors. Existing dredged sediment stockpile sites are considered areas where continued stockpiling of dredged sediment will be readily approved by the RD and landowner. These areas are depicted on Figure 3.

### 4.1.2 Potential Stockpile Sites Identified by the RD

Interviews with the RDs, and/or the RD engineer, identified potential opportunities for stockpiling dredged sediments at strategic locations within the district. These locations are associated with landowners assumed (by the interviewee) to be receptive to negotiations to place dredged sediment on their property and proximal to areas where the sediments would be reused. Because the islands and tracts are predominantly privately owned and used for agriculture, converting some portion of the current land to a stockpile site for dredged sediment would require negotiations with the RD and landowner.

Potential dredged sediment stockpile sites identified by the RD are considered to represent general areas where stockpiling dredged sediment are more likely to be accepted. These areas are depicted on Figure 3.

These areas were identified during meetings with the RD engineer by sketching approximate locations on a map. Consequently, the boundaries of these potential Stockpile sites are approximate and the area could increase or decrease based on a field level review of the site conditions, actual property lines, current crop cover, and negotiations with the landowner and RD. Therefore, it is recommended that those areas of interest for actual development as a dredged sediment stockpile site be further investigated. These investigations should include, but not be limited to, assessments of land cover, access, capacity, ability to permit, and landowner acceptance.

### 4.1.3 Potential Stockpile Sites Identified Using Land Cover Data

The GIS information selected, as described above, was used to identify areas where stockpile sites for dredged sediments could be potentially developed without substantial impact to infrastructure, sensitive habitat, and high-value agricultural. The specific types of information provided in the land cover data that were used in the GIS to exclude areas for potential stockpiling of dredged sediment are described below and are depicted on Figure 3. An estimated buffer was assigned to each type of land cover to recognize issues related to risk (e.g. failure of the berm surrounding the stockpile site, nuisance (e.g. noise, lights), and safety (e.g. attraction to passersby). It is anticipated that the actual buffer may differ from that estimated below, and will be based on negotiations with the landowner, adjacent landowners, the RD, and the permitting agencies.

*GIS information locating infrastructure excluded as a potential stockpile area*

- Campus_complex_point file was obtained from Tele Atlas North America Incorporated (2007) and identifies Institutions, Hospitals, Educational Institutions, Religious Institutions, Government Centers, and Cemeteries (ESRI, 2007). A buffer of 500 feet beyond these areas is also excluded.
- Well_field_point file was obtained from the California Division of Oil, Gas and Geothermal Resources (DOGGR, 2006) and identifies active oil and gas wells. A buffer of 250 feet beyond these areas is also excluded, which is based on our discussions with DOGGR.
- Aqueduct_tunnel_centerline file was obtained from DWR (undated) and identifies aqueducts. A buffer of 250 feet beyond these areas is also excluded, which is based on our discussions with the East Bay Municipal Utility District (EBMUD).
- Wetland_area file was obtained from the California Department of Fish and Game (CAF&G, 1997) and identifies "other" areas associated with development. A buffer of 250 feet beyond these areas is also excluded.
- Airfield_area file was obtained from Tele Atlas North America Incorporated (2007) and identifies airports (ESRI, 2007). A buffer of 500 feet beyond these areas is also excluded.
- Landing_point was obtained from CAF&G (2002) and identifies boat launches. A buffer of 250 feet beyond these areas is also excluded.
- Railroad_centerline file was obtained from Tele Atlas North America Incorporated (2007) and identifies rail lines. A buffer of 250 feet beyond these areas is also excluded.
- Road_centerline was obtained from Dynamap (2007) and identifies publicly maintained roads. A buffer of 250 feet beyond these areas is also excluded.

*GIS information locating high value agriculture excluded as a potential stockpile area*

- Land_use_area file was obtained from DWR (2006) and identifies the following types of land covers that were excluded.
  - Trees and Orchards, plus a buffer of 250 feet, associated with:
    - almonds
    - apples
    - apricots
    - cherries
    - peaches
    - miscellaneous deciduous
    - mixed agriculture
    - mixed agriculture and native classes
    - mixed deciduous trees
    - mixed subtropical trees
    - nectarines
    - pears
    - subtropical trees
    - walnuts
  - Developed areas plus a buffer of 500 feet, associated with:
    - dairy
    - entry denied
    - farmstead
    - feed lot
    - poultry farm
    - mixed agriculture, urban
    - urban
    - mixed agriculture, urban, native classes
    - mixed urban
    - mixed urban and native classes
  - Other areas, plus a buffer of 250 feet, associated with:
    - rice
    - turf/sod
    - water
    - vineyards

*GIS information locating sensitive habitats excluded as a potential stockpile area*

- Habitat_protective_zone_area file was obtained from the United States Fish and Wildlife Service (2009) and identifies National Wildlife Refuges. A buffer of 250 feet beyond these areas is also excluded.
- Land_use_area file was obtained from DWR (2006) and identifies habitats with native vegetation and open water. A buffer of 250 feet beyond these areas is also excluded.
- Wetland_area file was obtained from the California Department of Fish and Game (CAF&G, 1997) and identifies the following types of land covers that were excluded. A buffer of 250 feet beyond these areas is also excluded.
  - seasonally flooded estuarine emergents

- seasonally flooded palustrine emergents
- permanently flooded estuarine emergents
- permanently flooded palustrine emergents
- tidal estuarine emergents
- tidal flats
- non-tidal flats
- riparian woody
- non-riparian woody
- open water

Potential stockpile sites identified by filtering land cover data have not, by definition, been reviewed by the RD or the RD engineer. These areas simply identify areas of land largely without significant infrastructure, high value agriculture, or sensitive habitat. It is recommended that those areas that are of interest for actual development as a dredged sediment stockpile site be further investigated. These investigations should include, but not be limited to, field level assessments of actual land cover, access, capacity, ability to permit, and landowner acceptance. The area of the potential stockpile site could change based on further assessments and adjustments to the buffer.

## 4.2 Capacity of Stockpile Sites

This report uses the term *total capacity* as that volume of sediment and water that can be held in a stockpile site, and *effective capacity* as that portion of the discharge that would be sediment discharged to the stockpile site (Section 2 describes the proportions of sediment and water). Both terms assume no loss of water at the stockpile site occurs during the period of dredging. This assumption is clearly conservative because it assumes water is not decanted back to the river and ignores natural processes (e.g. evaporation, infiltration) that reduce the volume of the water within the stockpile site. As the stockpile sites are selected for further evaluation, the effects of these processes should be further evaluated. Table 4 presents the capacity information of each exiting and potential stockpile site in the study area.

The total capacity of the existing and potential stockpile sites was obtained from the USACE (or its contractors), from the site owner or operator, or was estimated by AWR if no capacity information was available. The method used to estimate the capacity used the following parameters and constraints:

A. Area of the stockpile site, based on maps provided by USACE and DWR.

B. Lowest elevation of the adjacent or nearby levee, based on LIDAR data provided by DWR (2007), was used to limit the overall height of material in the stockpile site.

C. Average approximate elevation of the land surface within the stockpile site, based on LIDAR data provided by DWR (2007), was used to support the volume calculation.

D. Limiting the minimum distance between the top of the materials (water and sediment) discharged to the stockpile site and the lowest point of the nearby levee.

This distance was estimated based on discussions with the various RD engineers, and typically ranges (with some exceptions) from 2 meters in the upriver portions of the study area to 4 meters in the downriver areas. The elevation of ground surface in the Delta decreases from approximately sea level within the eastern (upriver) islands to as low as 20 feet below sea level in the western (downriver) areas. As a result, the overall height of the levees above ground surface increases towards the west. In addition, the thickness of the highly compressible peat in the Delta increases from approximately 0 feet in the east to more than 40 feet in the western islands. These distances are intended to reduce the overall thickness of material discharged to the stockpile site, which should reduce the risk of failure of berms constructed around the stockpile, risk to the island levees, and allow the rate of peat compression to be managed.

Based on the above, the equation below was used in Table 4 to calculate:

$$\text{Estimated Total Capacity of Stockpile Site} = A \cdot (B - C - D)$$

The resulting calculated estimated total capacity is approximate and subject to change based on field level geology, biology, and engineering and geotechnical studies; requirements imposed by the RD, engineer, and landowner; levee design criteria imposed by DWR and USACE; and changes to the existing levee.

# 5. IDENTIFICATION OF REUSE SITES

## 5.1 Types of Reuse Sites

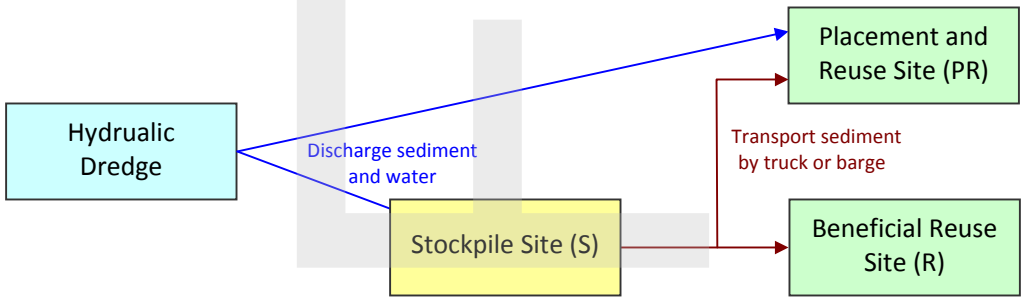
Assuming all sediment quality issues are met, this study has identified the following two general types of reuse opportunities. Sediment quality refers to geotechnical and geochemistry characteristics of the sediments.

- Reuse Only Sites (R): are those beneficial reuse opportunities that can only be satisfied with the delivery sediments. The reuse only site does not have the facility to receive, manage, or store the volume of water that would be generated directly from the hydraulic dredge.

- Placement and Reuse Sites (PR): are those beneficial reuse sites that can be designed to directly receive the discharge of water and sediment from the hydraulic dredging activity. While PR sites can also receive dry sediment, they provide the additional benefit of receiving material directly from the hydraulic dredge, which avoids the rehandling and transportation costs that accompany discharge to a stockpile. Following discharge to a PR site, the subsequently dewatered sediment would be moved and reworked (e.g. compacted, sloped, etc.) within, or immediately adjacent to, the site for beneficial reuse. PR sites are distinguished from stockpile sites because sediment at the latter will be relocated via truck or

barge to some distant beneficial reuse site. PR sites are distinguished from R sites because sediment at the latter can only receive dry sediment.

**Schematic: Path of Hydraulically Dredged Sediments to Beneficial Reuse Site**




## 5.2 Categories of Beneficial Reuse

Beneficial reuse covers a broad range of reuses, as defined in the *Draft Beneficial Use of Dredged Material: Definitions for Reporting in the Dredging Information System* (USACE, 2009). The table below compares the broad categories provided in this reference with reuse opportunities identified in the Delta.

**Table 5: Comparison of Draft USACE Beneficial Use Categories with Delta Reuse Opportunities**

| Category | Subcategory | Delta Opportunity | Reuse Only (R) or Placement and Reuse (PR) Site |
|---|---|---|---|
| Habitat development | Wetlands | ✓ | PR |
| | Uplands | ✓ | R |
| | Island (create new) | -- | -- |
| | Aquatic (submerged) | -- | -- |
| Parks and Recreation | | -- | -- |
| Beach Nourishment and Sediment Management | | -- | -- |
| Construction and Agriculture | Levees | ✓ | PR |
| | Construction and Development | ✓ | PR |
| | Agricultural Uses (top soil, drainage) | ✓ | PR |
| | Forestry, Horticulture, Aquaculture | -- | -- |
| | Land Reclamation/Subsidence Reversal | ✓ | PR |
| | Landfill cover | ✓ | R |

## 5.3 Opportunities to Beneficially Reuse Dredged Sediments in the Delta

Opportunities to beneficially reuse dredged sediments in the Delta were explored by contacting the RD engineers and agencies identified in Section 3. The types of beneficial reuse opportunities identified in the Delta are listed below. Table 4 lists each potential beneficial reuse project identified along with the source of the information. Figure 4 shows the locations of all potential beneficial reuse sites identified in this study.

- Levees (L) – raise elevation, construct landside slopes and toe berms on many Delta Islands,
- Filling or Shallowing of Channels (SC) – reduces stress on levees adjacent to unnecessarily deep channels,
- Habitat Development of Uplands (HU) – the Antioch Dunes National Wildlife Refuge needs material, but has concerns regarding sediment quality,
- Habitat Development of Wetlands (HW) – creation and enhancement at Dutch Slough and as part of the Bay Delta Conservation Plan to create or enhance 65,000 acres of habitat,
- Landfill Cover (LC) – Yolo County Landfill expressed a need for landfill cover material,
- Levees along Railroad Lines (LR) – construct or enhance levees along railroad lines to provide additional protection,
- Residential Development (CF) – support residential development by Shea Homes on Hotckiss Tract,
- Road Construction (CF) – CalTrans expressed a need for fill material, but has concerns regarding sediment quality.
- Subsidence Reversal (SR) – filling in low areas and adding top soil on many Delta Islands,

The material needs for all of the above beneficial reuse opportunities can be satisfied by delivering dry sediment from a stockpile site. Examples of beneficial reuse opportunities that can be satisfied by direct discharge from the hydraulic dredge (to a PR site) include:

- Levee enhancement projects could employ the method of *pumping in the levee*, which involves creating a rather narrow (e.g. 250 feet wide) placement site that parallels the inland side of the levee. Discharge from the hydraulic dredge is directed into the narrow placement site and when the sediment is dry it is reworked to form the landside slope and toe berm.
- Subsidence reversal projects can directly receive the discharge from the hydraulic dredge and would then keep the dry sediment in place to raise elevation.
- Wetland habitat creation projects could directly receive the discharge from the hydraulic dredge, and then the sediment could be reworked to form habitat when water level recedes.

## 5.4 Volume of Sediment

The volume of dredged sediment that each potential reuse project could consume is listed on Table 4, if the estimate was provided by the source (e.g. RD engineer). Unlike the capacity estimates of stockpile sites, this report does not independently estimate the volume of material that could be consumed by at a reuse site. Furthermore, the tabulated estimated volumes did not involve rigorous calculations by the engineer, but rather simply reflect an order of magnitude estimate of the amount of compacted material the identified reuse or placement and reuse site could consume. Consequently, these volumes are likely to change as the reuse project is further designed.

# 6. ENGINEERING CONSTRAINTS

The evaluation of engineering constraints considered issues related to the:

- Development of stockpile sites,
- Accessibility to stockpile, placement and reuse, and reuse sites,
- Order of magnitude costs to develop stockpile and PR sites and to deliver sediment using hydraulic dredging equipment,
- Order of magnitude costs to deliver dry sediment to reuse sites and placement and reuse sites by truck or by barge,
- Sediment quality, including chemistry and geotechnical characteristics.

## 6.1 Sources of Information

The following companies were contacted to obtain relevant information:

- Ross Island Sand and Gravel Company, Portland, Oregon – offers considerable experience performing maintenance dredging of the DWSCs. Ross Island contributed to the information provided herein.
- Manson Construction, Richmond, California – performs dredging, marine construction, and levee construction throughout the United States. Ross Island contributed to the information provided herein.
- Dutra Dredging Company, San Rafael, California – performs dredging, marine construction, and levee construction throughout California. Dutra did not respond to information requests for information.

- Kjeldsen, Sinnock & Neudeck, Incorporated, Stockton, California – provides engineering design and construction management services in the California Delta and central valley. KSN contributed to the information provided herein.

- MBK Engineers, Sacramento, California – provides engineering design and construction management services in the California Delta and central valley. MBK contributed to the information provided herein.

- DCC Engineering, Walnut Grove, California – provides engineering design and construction management services in the California Delta and central valley. DCC contributed to the information provided herein.

- Frank C. Alegre Trucking Incorporated, Lodi, California – provides loading, bulk transportation, and off loading of fill materials in and adjacent to the Delta. Alegre contributed to the information provided herein.

- Conti Trucking, Incorporated, Stockton, California – provides loading, bulk transportation, and off loading of fill materials in and adjacent to the Delta. Conti Trucking did not respond to requests for information.

- Mr. Trucker Incorporated, Stockton, California – provides loading, bulk transportation, and off loading of fill materials in and adjacent to the Delta. Mr. Trucker did not respond to requests for information.

The following assumptions and conversions regarding weight and volume of sediments are provided to help the reader compare estimated costs associated with the same metric, or volume of sediment. That is, sediments within the riverbed are considered "bank" sediments because they have settled and compacted over time. Hydraulic dredging makes the sediments "loose" (decrease density) and the amount of bulking is a function of sediment type, grain size distribution, method of deposition, water content, salinity, and plasticity. Once discharged to land, the sediment will reconsolidate under it's own weight, or increase in density, and is considered a "bank" material (USACE, 1993). Then, excavation to transport the sediment to some reuse site will again make the sediment "loose". The bulking factor for mechanically dredged sand and silt ranges from about 1.1 to 1.4 (Bray, 1997).

In short, the deepening project will dredge bank sediments from the bottom of the DWSC and discharge loose sediments to the stockpile site. Then, following dewatering and consolidation, bank sediments will be excavated from the stockpile site and transported as loose sediment to the reuse site, where it will likely be compacted to meet some geotechnical engineering criteria. This report conservatively assumes that 1 cubic yard of bank sediment becomes 1.4 cubic yards of loose sediment when trucked or barged, and that 1 cubic yard of loose sediment weighs 1.5 tons, or 3,000 pounds.

**Table 6: Comparison of Bank and Loose Sediments**

| | Volume | Weight | | Volume | Weight | |
|---|---|---|---|---|---|---|
| | cyd | tons | | cyd | tons | |
| Bank sediment | 1.00 | 2.10 | = | 1.40 | 2.10 | Loose sediment |
| Loose sediment | 1.00 | 1.5 | = | 0.71 | 1.5 | Bank sediment |

## 6.2 Engineering Constraints Associated with Stockpile Sites

### 6.2.1 Engineering Design and Construction of a New Stockpile Site

The engineering design of a new dredged sediment stockpile site or a PR site is based on a thorough assessment of the geotechnical characteristics of the site. These considerations include, and are not limited to:

- Ground surface, levee, and river elevation,
- Site drainage and Infiltration,
- External and internal berms (height, width, slope, and mass),
- Water circulation, weir design, and retention time,
- Rate of dredged sediment discharge,
- Soil characteristics (thickness, plasticity, density, compressibility, strength),
- Depth to ground water,
- Encroachment constraints.

These considerations exclude requirements relating to receiving permits and approvals to build, which are addressed elsewhere in this report. The costs to obtain the necessary permits to construct and operate these sites could be substantial.

The following provides an approximate order of magnitude estimate of the costs to design and construct a new 100 acre dredged sediment stockpile site. These costs should not be used for decision-making or developing budgets, but can be used as preliminary estimate subject to change based on site-specific requirements. Note that these costs exclude items such as permitting, environmental studies, mitigation, and legal agreements with landowners.

**Table 7: Estimated Costs to Design and Construct New Stockpile Site**

| New Stockpile Site | Unit | Estimated Costs ($1,000s) |
|---|---|---|
| Site Evaluation (engineering, geotechnical, etc.) | 100 acre site | $30 |
| Design (engineering, geotechnical, etc.) | 100 acre site | $20 |
| Bid and Construction Management | 100 acre site | $50 |
| Construction (with 8 foot external berms) | 100 acre site | $500 |
| Total | | $600 |

### 6.2.2 Access to Stockpile and PR Sites

Stockpile and PR sites need to be accessible to receive the discharge of dredged sediment and water, and to subsequently enable the sediment to loaded and transported to a reuse site. Access parameters affecting the discharge of dredge materials relate directly to the distance between the DWSC and the Stockpile Site. The shortest and longest likely distances between the DWSC and the Stockpile sites were measured and are described below and are listed on Table 4. It is likely that the actual distance will be somewhere between these two limits.

- Distance between the DWSC and the stockpile site (straight line) – is a measurement of the shortest distance between the DWSC and the stockpile site. This distance assumes that all properties, roads, water ways, and other infrastructure can be crossed.

- Distance between the DWSC and the stockpile site (within channels) – is a measurement of the likely longest distance between the DWSC and the stockpile site only within waterways. This distance assumes that all the permitting agencies and the US Coast Guard will allow the pipeline to be placed in the channels connecting the DWSC to the Stockpile site.

The USACE has divided the Sacramento DWSC into five reaches, as shown on the figures. Tables 8 through 12 compile, by reach, the estimated total and effective capacity of each stockpile site, and estimate sediment to be used at each placement and reuse (PR) and reuse (R) site. Each table lists the stockpile, placement and reuse, and reuse sites based on distance from the reach. To avoid duplication within a single reach, sites that span more than one distance from the reach (i.e. long sites that have portions within 10,000 feet and other portions that are within 20,000 feet of the DWSC) are associated with the closest distance to the DWSC. Sites are, however, associated with more than one reach, based on distance (i.e. a site may be both 10,000 feet from Reach 1 and 20,000 feet from Reach 2). These tables also provide estimated costs to hydraulically dredge and discharge sediment and water to the stockpile sites using the information developed below. Additional discussion of these tables is provided in Section 8.

### 6.2.3 Estimated Costs to Deliver Dredged Sediment to Stockpile and PR Sites

The deepening project assumes hydraulic dredging and all materials discharged to the stockpile site will be via a pipeline. The table below provides estimated costs to deliver hydraulically dredged sediments to a stockpile site solely as a function of distance between the dredge and the stockpile site. These estimated costs assume that a booster pump will be required for every additional 10,000 feet of pipeline.

These estimated costs do not consider the effects due to other potentially significant factors that can increase or decrease costs, including but not limited to: permit compliance, grain and density (hardness) of the bank sediment, road crossings, landowner constraints, booster pumps with the ability to pump 15,000 feet, etc. The wide range in estimated costs indicates a relatively high degree of uncertainty at this point in the project. Consequently, the costs estimated below should not be used for decision-making or developing budgets, but can be used as preliminary estimate subject to change based on site-specific requirements.

**Table 13: Estimated Costs to Deliver Hydraulically Dredged Material**

| | | Unit | Dredge Project Parameters: Pipe Length and Volume | | | | |
|---|---|---|---|---|---|---|---|
| Assumptions | Length of Discharge Pipe | feet | 10,000 | 20,000 | 30,000 | 40,000 | 50,000 |
| | Booster Pumps | Count | 0 | 1 | 2 | 3 | 4 |
| | Discharge Water | % | 10% | 10% | 12.5% | 15% | 15% |
| | Discharge Sediment | % | 90% | 90% | 87.5% | 85% | 85% |
| Dredge Company 1 | Mobilization and Demobilization | Event | $1,000,000 | $2,000,000 | $3,000,000 | $4,000,000 | $5,000,000 |
| | Dredge bank and pump | $/cubic yd | $6.50 | $8.50 | $11.00 | $14.00 | $17.50 |
| | Dredge and pump 1,000,000 cyds | cubic yds | $7,500,000 | $10,500,000 | $14,000,000 | $18,000,000 | $22,500,000 |
| | Unit Cost | $/cubic yd | $8.50 | $12.50 | $17.00 | $22.00 | $27.50 |
| Dredge Company 2 | Daily Cost (includes mob/demob) | $/day | $125,000 | $175,000 | $225,000 | $275,000 | $325,000 |
| | Hourly Production * | cyds/hr | 1,400 | 1,400 | 1,400 | 1,400 | 1,400 |
| | Production per 16 hour day | cyds/day | 21,840 | 21,840 | 21,840 | 21,840 | 21,840 |
| | Unit Cost | $/cubic yd | $5.75 | $8.00 | $10.30 | $12.60 | $15.00 |
| | Dredge and pump 1,000,000 cyds | project | $5,750,000 | $8,000,000 | $10,300,000 | $12,600,000 | $15,000,000 |
| | Average Unit Cost | $/cubic yd | $7.15 | $10.25 | $13.65 | $17.30 | $21.25 |

* assumes stockpile site can accept this rate of production.

## 6.3 Engineering Constraints Associated with Reuse Sites

This report does address the constraints associated with delivering dry dredged sediment to reuse sites and PR sites. It is noted that the engineering constraints described above for PR sites are associated with the direct discharge of hydraulically dredged sediment and water, and that these constraints differ from those associated with the delivery of dry dredged sediments from stockpile sites. The design of a reuse site is beyond the scope of this report because each reuse project has unique requirements.

### 6.3.1 Access to Reuse and PR Sites

The transportation of *dry* dredged sediment from the stockpile site to the reuse or PR site will likely be by truck or by barge. Therefore, the relevant access parameters are the distance to a paved road and the draft in the adjacent water channel, which are summarized on Table 4.

- Distance from the Paved Road (straight line) – is a measurement of the shortest distance between the Reuse and PR Site and the nearest paved road. It is possible that this distance could be longer, to comply with landowner requirements.
- Water Depth (draft) in Adjacent Channel – the USGS (2002) documented the draft in channels within the Delta. Discussions with barge operators indicate that a barge hauling 1,400 tons of sediment would require a draft of approximately 12 feet, 5,500 tons would require approximately 15 feet, and a tug would require a draft of approximately 10 to 14 feet.

### 6.3.2 Estimated Costs to Deliver Dry Dredged Sediment to Reuse and PR Sites

Order of magnitude costs have been estimated to transport dry dredged sediment from stockpile sites to reuse and PR sites by truck and by barge.

#### 6.3.2.1 Estimated Trucking Costs

Trucking the dredged sediment is generally a straightforward process that involves direct loading into the truck, driving the truck from the stockpile site to the reuse site, and then offloading the materials. The table below provides estimated order of magnitude costs to transport sediment in trucks pulling two 10 cubic yard tandems, or with a total capacity of 20 cubic yards of loose sediment. However, in practice, these trucks typically haul 14 to 16 cubic yards of loose soil per load, or the equivalent of 10 cubic yards of compacted (bank) sediment. These costs should not be used for decision-making or developing budgets, but can be used as preliminary estimates subject to change based on site-specific requirements.

**Table 14: Estimated Costs To Truck Dry Dredged Sediment From Stockpile To Reuse Site**

| Distance Range miles | | | $/load | $/cyd |
|---|---|---|---|---|
| 0 | to | 2 | $32 | $2.13 |
| 3 | to | 4 | $39 | $2.60 |
| 5 | to | 6 | $46 | $3.07 |
| 7 | to | 8 | $53 | $3.53 |
| 9 | to | 10 | $60 | $4.00 |
| 11 | to | 12 | $67 | $4.47 |
| 13 | to | 14 | $74 | $4.93 |
| 15 | to | 16 | $81 | $5.40 |
| 17 | to | 18 | $88 | $5.87 |
| 19 | to | 20 | $95 | $6.33 |
| 21 | to | 22 | $102 | $6.80 |
| 23 | to | 24 | $109 | $7.27 |
| 25 | to | 26 | $116 | $7.73 |
| 27 | to | 28 | $123 | $8.20 |
| 29 | to | 30 | $130 | $8.67 |

| Distance Range miles | | | $/load | $/cyd |
|---|---|---|---|---|
| 31 | to | 32 | $137 | $9.13 |
| 33 | to | 34 | $144 | $9.60 |
| 35 | to | 36 | $151 | $10.07 |
| 37 | to | 38 | $158 | $10.53 |
| 39 | to | 40 | $165 | $11.00 |
| 41 | to | 42 | $172 | $11.47 |
| 43 | to | 44 | $179 | $11.93 |
| 45 | to | 46 | $186 | $12.40 |
| 47 | to | 48 | $193 | $12.87 |
| 49 | to | 50 | $200 | $13.33 |
| 51 | to | 52 | $207 | $13.80 |
| 53 | To | 54 | $214 | $14.27 |
| 55 | To | 56 | $221 | $14.73 |
| 57 | To | 58 | $228 | $15.20 |
| 59 | To | 60 | $235 | $15.67 |

Assumptions affecting these costs include:

- Dry to damp sediment,
- Trucks carry 20 loose cubic yards and 1 cubic yard of loose sediment weighs 3,000 pounds, or 1.5 tons,
- Ready access to the stockpile site and reuse sites,
- Compact and stable ground that supports all construction vehicles at risk,
- Agreements with all landowners to allow access for all equipment and vehicles,
- Additional costs include equipment mobilization and demobilization at $2,500 per event and $5,000 per day to rent a loader, water truck, and blade equipment,
- Depending on the distance, road conditions, and site conditions, the equipment can create 100 to 200 loads per day,

- Cost may be adjusted in response to fuel prices, night or weekend work, purchaser's labor agreements, prevailing wage requirements, or requirements to cover the load (e.g. with a tarp) during transport.

### 6.3.2.2 Estimated Barge Costs

Barging the dredged sediment is a more complex operation that involves first moving the dry dredged sediment to a location where it can then be loaded onto the barge by conveyor or crane. This relocation may involve loading and trucking within the stockpile site to the loading area. When the barge is loaded to capacity, it is then moved within waterways by tugboat. The sediment is then offloaded by conveyor or crane onto the reuse area. In some cases, heavy equipment may be needed move the sediment away from the offloading area.

The table below provides estimated order of magnitude costs to transport sediment via a barge that can transport 1,400 tons of bulk material. These costs should not be used for decision-making or developing budgets, but can be used as preliminary estimates subject to change based on site-specific requirements. Furthermore, a single company provided these unit costs and additional estimates may provide lower costs.

**Table 15: Estimated Costs To Barge Dry Dredged Sediment From Stockpile To Reuse Site**

| Description | Unit | Rate | Tons of Sediment moved by 1,400 ton barge: | | |
|---|---|---|---|---|---|
| | | | 10,000 | 100,000 | 1,000,000 |
| Mobilization / Demobilization | event | $180,000 | $180,000 | $180,000 | $180,000 |
| Move seds to conveyor for loading | tons | $1.50 | $15,000 | $150,000 | $1,500,000 |
| Load sediments onto 1,400 ton barge | tons | $8.70 | $87,000 | $870,000 | $8,700,000 |
| Move barge by tug (60 mile roundtrip) | mile | $165 | $79,200 | $712,800 | $7,078,500 |
| Offload sediment with crane barge | tons | $8.50 | $85,000 | $850,000 | $8,500,000 |
| Spread material at reuse site | tons | $1.50 | $15,000 | $150,000 | $1,500,000 |
| Number of roundtrips | roundtrips | | 8 | 72 | 715 |
| Unit Cost per ton | | | $46 | $29 | $27 |
| Unit Cost per loose cubic yard | | | $69 | $44 | $41 |

The same assumptions listed above apply to barging operations, plus:

- Sufficient draft in the channels adjacent to and connecting the stockpile and reuse sites to allow access by the barge and tugboat,

- Ability to setup a "spud" barge to provide a mid-span support for the conveyor between the stockpile or reuse site and the barge.

## 6.4 Sediment Quality

The above discussion regarding the stockpiling and reuse of sediments assumes that all environmental and engineering concerns characterizing the dredged sediments are insignificant and pose no significant constraints. However, dredge sediments can vary widely with respect to grain size and chemistry, which can affect their suitability for stockpiling and reuse.

### 6.4.1 Chemistry

The Regional Water Board regulates dredged sediment as a waste and consequently, the placement of dredged sediment on the land must be comply with applicable Waste Discharge Requiements (WDRs). These WDRs typically require the sediment to meet specific geochemical characteristics that have been developed to minimize risks to human health and environment, including water and biological resources. Samples of sediments to be dredged are collected and analyzed to measure both total and water soluble concentrations organic an inorganic chemicals using methods approved by the USEPA and the CalEPA. In addition to the dredged sediments exhibiting an acceptable geochemistry, the Regional Water Board also requires that the dredged sediments do not significantly degrade the background, or natural, quality of the surface water resources adjacent to, and the ground water resources underlying, the stockpile and reuse sites. This criterion requires a technical understanding the water quality at the site where the dredged sediments are to be stockpiled and/or beneficially reused.

The USACE collected and analyzed 47 samples of sediment to characterize the geochemistry of the material that would be dredged by the deepening of the Sacramento DWSC. These samples were analyzed to characterize their total and water soluble concentrations of the inorganic and organic chemicals listed on Tables 16 and 17, respectively. Overall, the geochemistry does not appear to pose a significant risk that would preclude the stockpiling and upland reuse of these sediments. However, the USACE report of these concentrations to the Regional Water Board is currently under development.

- Total concentrations in sediments to be dredged within the DWSC are compared with the USEPA Region 9 Regional Screening Levels (Table 16). Based on these results, the total concentrations in dredged sediment consistently exceed the RSL for arsenic, exceed the RSL for cobalt in seven samples, and exceed the RSL for the polynuclear aromatic hydrocarbon benzo(a)pyrene in eight samples. The arsenic concentrations, while above the RSL are well within the range of typical background concentrations in the California central valley. Those cobalt concentrations that exceed the RSL, do so by less than 10 percent and do not appear to pose a significant risk. Sources of benzo(a)pyrene include natural forest fire and anthropogenic sources, such as burning vegetation and diesel exhaust.

- Water soluble concentrations in sediments to be dredged within the DWSC are compared with the reuse limitations prescribed in the Regional Water Boards Waste Discharge Requirements R5-2009-0085 (Table 17). While this WDR is not designed for the proposed deepening project, at the time of this writing it is the most recent WDR issued by the Regional Water Board for managing dredging and dredged sediments. The results revealed water soluble concentrations of arsenic, copper, lead, and mercury above the WDR criteria in some samples. Re-analysis of many of these samples revealed fewer samples exceeding criteria.

### 6.4.2 Geotechnical

The USACE collected and analyzed 42 samples of sediment to characterize the grain size distribution of the material that would be dredged by the deepening of the Sacramento DWSC. The average distribution of grain size reveals approximately 3% of the sediment as gravel, 56% of the sediment as sand, and 41% of the sediment as silt. For construction purposes, geotechnical criteria typical seek an even distribution of grain sizes between sand and silt to and strength, compaction, and resistance to erosion. While additional criteria and site-specific testing will likely be required, these sediments appear to offer acceptable geotechnical characteristics. However, because the discharge from hydraulic dredging tends to separate the grain sizes, reworking these sediments to create the appropriate mix may be necessary to satisfy some specific geotechnical and engineering design.

## 7. REGULATORY AGENCY FRAMEWORK AND COMPLIANCE

The regulatory framework that would govern the proposed deepening, the associated stockpile of dredged sediments, and the subsequent reuse of the dredged material includes several executive orders; numerous federal, state, and local regulations; and other governmental state and local plans and policies. Detail on specific legislation, requirements, and regional/local plans and policies will be provided in the EIS/EIR and are summarized in the subsequent sections.

NEPA/CEQA requires a Lead Agency to identify environmental effects that may result in significant adverse effects, develop reasonable mitigation measures, and to complete the EIR/EIS. This document should consider the project's consistency with local and State plans such as the Delta Protection Management plan, Delta Vision, and Cal-Fed Bay Delta Plans.

The Project will need to include mitigation strategies for the dredging activity and for the selected stockpile alternatives. Developing acceptable mitigation measures first involves estimating the magnitude of the potential impacts. Possible solutions to mitigate these potential impacts could include measures that occur on-site and/or off-site, and in-kind and/or out-of-kind resources. Selection of the possible mitigation measures will be based on a comparison of the potential impacts with the benefits to be derived from the proposed mitigation measure and the cost to implement the mitigation measure.

## 7.1 Regulatory Agencies and Resource Trustees

Local, state, and federal agencies that issue permits or approvals associated with the dredging, stockpile, and/or reuse of dredged sediments, include but are not limited to:

- U.S. Army Corps of Engineers
- U.S. Bureau of Land Management
- U.S. Coast Guard
- U.S. Department of Transportation
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- NOAA National Marine Fisheries Service
- California Central Valley Flood Protection Board
- California Department of Fish and Game
- California Department of Toxic Substances Control
- California Department of Transportation
- California Department of Water Resources
- California Environmental Protection Agency (CalEPA)
- California Regional Water Quality Control Boards (e.g. Central Valley)
- California State Historic Preservation Office
- California State Lands Commission
- California State Water Resources Control Board
- Regional Air Quality Management Districts (e.g., Sacramento)
- County Development Departments (Ministerial Encroachment Permits)
- County Engineering/Public Works Departments (Ministerial Encroachment Permits, Grading Permits)
- Local Reclamation Districts (Ministerial Encroachment Approval)
- Native American Heritage Commission

The overall permitting process requires planning and strategy in coordination with multiple federal, state, and local agencies, as well as with stakeholders. For a project of this scale, an EIS/EIR will be produced. Until the preferred stockpile sites and reuse sites are identified as the selected alternatives, the actual permits, approvals, and consultations cannot be specified. Instead, a general description of the permits and regulations potentially affecting the project are listed below. Table 19 compares these permits and approval processes with the potential types of stockpile and reuse projects that may be associated with the deepening project.

### 7.1.1 Federal Agencies

*U.S. Army Corps of Engineers*

USACE has primary responsibility for maintaining navigable waters throughout the United States. The Rivers and Harbors Act of 1899 requires USACE to issue permits for all dredging activities

affecting navigable waters. As the federal sponsor for these construction activities, the USACE usually takes the lead in developing the documentation for permitting such as for the 1969 NEPA. Dredging conducted by the USACE is covered by permits and is subject to the same environmental reviews required for permitted dredging projects, including water quality certification by the CVRWQCB. The Marine Protection Research and Sanctuary Act of 1972 gives the USACE permitting authority over the transportation and disposal of dredged material into coastal waters and the open ocean. The US Army Corps of Engineers (USACE) would:

- Issue the Record of Decision under NEPA,
- Issue a Section 10 permit for dredging under the Rivers and Harbors Act,
- Issue a Section 404 permit for aquatic disposal of material under the Clean Water Act,
- Submit a proposed Conformity Determination to EPA for the Clean Air Act,
- Submit proposed Consistency Determinations for regional plans and policies,
- Certify the EIR, issue Findings of Overriding Considerations, approve the Mitigation Monitoring and Reporting Program, and approve the project in its entirety,
- Obtain permits for stockpiling dredged material at existing reuse sites, wetland, or landfills, if applicable.

*U.S. Environmental Protection Agency*

USEPA is one of the principal authorities regulating pollution in and threats to water resources. This authority is derived primarily from the 1972 (and subsequent) amendments to the Federal Water Pollution Control Act or Clean Water Act (CWA). Because dredging and dredged sediments pose some potential risk to the environment, the USEPA has jurisdiction in this project. The USEPA oversees the CalEPA, including the State Water Resources Control Board and the California Department of Toxic Substances Control.

*U.S. Fish and Wildlife Service (USFWS) and/or NOAA National Marine Fisheries Service (NMFS)*

USFWS has jurisdiction over terrestrial wildlife, freshwater aquatic species, and plant species, and NMFS has jurisdiction over marine and anadromous aquatic species. Because dredging and dredged sediments pose some potential risk to the biological resources within the waterways and terrestrial environments, these biological resource agencies have jurisdiction in this project. The USFWS is authorized under the 1958 Fish and Wildlife Coordination Act to review federally funded, licensed, or permitted projects that potentially impact fish or wildlife habitat. The USFWS has additional authority under the Endangered Species Act when endangered or threatened species are involved. The NMFS is authorized under the CWA and the National Environmental Policy Act to review federal projects that may affect marine, estuarine, or anadromous fisheries.

Federal and state law require that resource agencies comment on many of the permit actions and consider endangered species impacts under their own jurisdiction. There are two types of formal consultation, under the Endangered Species Act, for which project proponents may obtain authorization from USFWS and/or NMFS:

- Endangered Species Act Section 7 Consultation – Section 7 of the Endangered Species Act allows for interagency consultation between federal agencies (e.g., USACE and USFWS/NMFS). Formal consultation under Section 7 requires involves the project's lead federal agency (i.e., USACE) to consult with the appropriate federal agencies (i.e., USFWS/NMFS) who will determine the effects of the project on federally-listed species and designated critical habitat, and identify the appropriate measures to avoid, minimize, and/or mitigate those effects. The findings are documented in a Biological Opinion, which may authorize some take of the species.

- Endangered Species Act Section 10(a) Incidental Take Permit - Section 10(a) of the Endangered Species Act allows for consultation between a project proponent and USFWS/NMFS in the absence of a "federal nexus" (i.e., no federal agency to enact Section 7 consultation). Under Section 10(a), the project proponent and USFWS/NMFS will discuss the potential adverse effects of the project on federally-listed species and discuss measures to avoid, minimize, and mitigate for those effects. Section 10(a) requires preparation and approval by USFWS/NMFS of a Habitat Conservation Plan before USFWS/NMFS can authorize the project or issue an Incidental Take Permit.

*U.S. Bureau of Land Management*

The Federal Land Policy and Management Act (1976) (FLPMA) provides the basic authority for the Bureau of Land Management's (BLM) multiple use management of all resources on the public lands. One of the BLM's many responsibilities under FLPMA is to manage public lands for the benefit of wildlife species and the ecosystems upon which they depend. FLPMA gave BLM the legal authority and mandate to manage and regulate the uses on the public lands "so that their various resource values are utilized in a combination that will best meet the present and future needs of the American people" (Section 103 (c)). If dredging and/or stockpiling of dredged sediments is proposed to occur on BLM land, then approvals from BLM would be required.

*US Coast Guard*

The USCG reviews permit applications to assure that dredging activities will not impair the safe and orderly flow of maritime traffic. The USCG also assists the USACE in monitoring the activities of disposal barges using its "Vessel Traffic System."

### 7.1.2 State Agencies

*San Francisco Bay Conservation and Development Commission*

The San Francisco Bay Conservation and Development Commission (BCDC) was created by the 1965 State McAteer-Petris Act and has permitting authority for dredging, disposal and filling activities within the Bay. The BCDC derives additional authority from the 1972 federal Coastal Zone Management Act (CZMA). The BCDC's policies concerning dredging activities are outlined in the San Francisco Bay Plan (Bay Plan), which is CZMA-certified. The BCDC reviews all proposed federal activities and licenses or permits for consistency with the Bay Plan.

*Regional Water Quality Control Board (RWQCB)*

The State Water Resources Control Board (SWRCB) is one of the principal authorities regulating pollution in water. This authority is derived primarily from the 1972 (and subsequent) amendments to the Federal Water Pollution Control Act or Clean Water Act (CWA). The SWRCB shares authority for the implementation of both the CWA and Porter-Cologne Water Quality Control Act with nine Regional Water Quality Control Boards. The dredging of the DWSC falls predominantly under the authority of the Central Valley Regional Water Quality Control Board and they would be responsible for issuing a Section 401 water quality certification for dredging and filling into waters of the United States.

The RWQCB would:

- Issue a Waste Discharge Order or Water Quality Certification (Section 401) for dredging activities and placement of dredged material to approved reuse sites.
- Issue a Waste Discharge Order or Water Quality Certification for each reuse site
- Issue a NPDES permit and/or Waste Discharge Order for reuse sites if there is an effluent discharge.
- Construction of landside components of the proposed project may also require a General Construction Activity Stormwater Permit as required by the National Pollutant Discharge Elimination System (NPDES).

*California State Historic Preservation Office (SHPO)*

Under NEPA and CEQA guidelines and through the National Historic Preservation Act (NHPA) Section 106 regulations require that the State Historic Preservation Office (SHPO) be consulted to assess potential impacts to cultural resources. SHPO will review the project to determine if it would result in significant adverse impacts to cultural resources. The USACE will consult with the SHPO to determine whether the project would affect cultural resources on, or eligible for listing on, the National Register of Historic Places.

*California State Lands Commission (SLC)*

The State Lands Commission (SLC) administers public trust lands in tidal and submerged areas and in coastal waters within a 3-mile state territorial sea limit. Dredging and filling activities on lands within SLC jurisdiction require prior written authorization. Authorization is provided in the form of a dredging permit or a mineral extraction lease, which are contingent upon compliance with the requirements of the California Environmental Quality Act.

*California Department of Transportation*

The California Streets and Highways Code, Sections 660 to 734, grant the authority to the California Department of Transportation (CalTrans) to permit improvements and other activities on the State's highway system rights-of-way by others. CalTrans has the discretionary authority to issue special permits for the movement of vehicles/loads exceeding statutory limitations on the size, weight, and loading of vehicles contained in Division 15 of the California Vehicle Code. Requests for such special permits requires the completion of and application for a Transportation Permit. In addition, Caltrans would also issue an encroachment permit for projects affecting areas within the rights of way (ROW) of state owned roadways.

*Central Valley Flood Protection Board*

The State Central Valley Flood Protection Board (CVFPB) oversees flood control along the Sacramento and San Joaquin Rivers and their tributaries in cooperation with the USACE. The Board works with federal, state, and local agencies and local governments in establishing, planning, constructing, operating, and maintaining flood control works. CVFPB will issue encroachment permits if the project (dredging, stockpiling, or reuse) proposes to work in a regulated stream or designated floodway on federal flood control project levee slopes or within 10 feet of the levee toe.

*Department of Water Resources*

The California Department of Water Resources (DWR) is responsible for managing the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments. The mission of the Bay-Delta Office (BDO) of DWR is to plan facilities and implement actions in the Sacramento-San Joaquin Delta to improve water quality, water supply and reliability, and the ecosystem. The Office provides monitoring, data collection, environmental analysis in order to assess the effects of projects and actions proposed or undertaken by the Department, other agencies, and project proponents. In this capacity DWR would not necessaryily issue any permits but staff would be responsible for reviewing the EIR/EIS to ensure consistency with current plans and programs under their purview.

*Regional Air Quality Management Districts (San Francisco, Yolo-Solano, Sacramento, San Joaquin)*

The regional Air Quality Management Districts (AQMDs) have adopted state and federal air quality standards. Because the operations associated with the proposed dredging, stockpile, and reuse activities may impact air quality, the AQMDs have jurisdiction over this project.

*Reclamation Districts*

Under the Central Valley Flood Control Protection Board, numerous Reclamation Districts are tasked with controlling flooding along the Sacramento and San Joaquin Rivers and their tributaries in cooperation with the U.S. Army Corps of Engineers. Reclamation Districts are tasked with managing and maintaining levees and drainage within their district. The levees protect agricultural and residential properties as well as vital habitat from flooding. The RD will issue permits, easements, and/or access agreements if construction activities could potentially impact levees or drainage in their district.

*Counties and Municipalities*

Counties and Municipalities with their local Engineering and Public Works Departments are typically responsible for controlling and conserving storm, flood and other surface waters for beneficial use and to enter into contracts for water supply. They typically have authority to ensure public safety and health, minimize nuisance conditions due to noise and light, maintain environmental resources and quality, and minimize impact to public roads. These entities are also likely to evaluate the consistency of the deepening of the DWSC and the associated stockpiling of sediments with their General Plan. Typical permits include construction (e.g. for grading), and encroachment.

*Ports of West Sacramento and Stockton*

Stockpile sites owned and/or operated by the Ports would require the Port to approve the stockpiling of dredge sediment. The Ports may also be involved in negotiating agreements with other landowners to facilitate the stockpiling of dredged sediments.

*Landowners*

Agreements are likely to be required between the USACE, Ports, and property owners with land that could serve as a dredged sediment stockpile site. These negotiated agreements are likely to consider such issues as access, impact, and lost income.

## 7.2 Consistency with Adopted Plans And Policies

Multiple plans have been and are being developed to address water quality, water resources, biological resources and ecosystem restoration, levee maintenance, and general planning for sustainability and preservation of the Delta. The evaluation of the project will likely include an assessment of its consistency with adopted plans and policies, including:

- California Bay-Delta Authority (CBDA),
- Delta Vision,
- Bay-Delta Conservation Plan,

- Delta Protection Commission.

## 7.3 Regulations and Laws

Federal and State regulations governing water, biological resources, and land management in the Delta and California in general include:

- Clean Water Act, Section 404/401(33 USC 1344),
- Rivers And Harbors Act Of 1899, Section 10 (33 USC 403),
- Endangered Species Act (16 USC 1531 Et Seq.),
- Fish And Wildlife Coordination Act (16 USC 661 Et Seq.),
- National Historic Preservation Act (16 USC 470 Et Seq.),
- American Indian Religious Freedom Act Of 1978,
- Farmlands Protection Policy Act,
- Executive Orders 11988 (Floodplain Management) And 11990 (Protection Of Wetlands),
- Water Commission Act (California Water Code Section 1000 et seq.),
- California Endangered Species Act (California Fish And Game Code Secs. 2050 et seq.).

Local authorities with jurisdiction may issue permits and approvals regarding:

- Real and potential impacts to environmental resources (e.g. air, water, wetlands, biota)
- Real and potential impacts to cultural resources (e.g. historic features)
- Access to property (e.g. encroachment, easement)
- Construction activities (e.g. grading, traffic)
- Maritime safety

# 8. SUMMARY OF FINDINGS

This section presents a summary of the findings for existing and potential stockpile sites, and the potential placement and reuse (PR) and reuse (R) sites identified in the area associated with the



Sacramento River DWSC (Figure 1). Figures 3, 4, and 5 show the locations of the existing and potential stockpile, placement and reuse, and reuse sites. Table 4 summarizes the information describing these sites. Tables 8 through 12 reorganize this information for each of the five reaches comprising the DWSC. Section 6 provides a detailed description of the information on these tables. The following summary is largely derived from the information on these tables and figures.

## 8.1 Stockpile Sites

The following summarizes the findings of the existing stockpile sites and those potential stockpile sites identified by the RD engineer, (note that the estimated volumes could be higher as additional information becomes available):

- 68 existing and potential stockpile sites with an estimated total capacity of approximately 142M cubic yards, and an effective capacity for sediment of approximately 14M cubic yards. However, operators of 18 of these stockpile sites have no estimated available capacity, either due to a lack of information or estimates provided herein based on topography.
- 32 existing stockpile sites with an estimated total capacity of approximately 25M cubic yards, and an effective capacity for sediment of approximately 2.5M cubic yards; 10 of these sites have no estimated capacity.
- 36 potential stockpile sites with an estimated total capacity of approximately 117M cubic yards, and an effective capacity for sediment of approximately 11.7M cubic yards; 8 of these sites have no estimated capacity.

Of these:

- 6 stockpile sites are located within 10,000 feet of the DWSC's Reach 1 and offer an estimated total capacity 3.7M cubic yards, and an effective capacity of 0.37M cubic yards. The estimated cost to stockpile these materials is $24.3M.
- 14 stockpile sites are located between 10,000 feet of the DWSC's Reach 2 and offer an estimated total capacity 20.4M cubic yards, and an effective capacity of 2.0M cubic yards. The estimated cost to stockpile these materials is $133M.
- 4 stockpile sites are located between 10,000 feet of the DWSC's Reach 3 and offer an estimated total capacity 3.4M cubic yards, and an effective capacity of 0.3M cubic yards. The estimated cost to stockpile these materials is $21.8M.
- 10 stockpile sites are located between 10,000 feet of the DWSC's Reach 4 and offer an estimated total capacity 3.1M cubic yards, and an effective capacity of 0.3M cubic yards. The estimated cost to stockpile these materials is $20.2M.

- 9 stockpile sites are located between 10,000 feet of the DWSC's Reach 5 and offer an estimated total capacity 4.9M cubic yards, and an effective capacity of 0.4M cubic yards. The estimated cost to stockpile these materials is $32M.

The above estimated costs include the estimated costs to dredge and pump the material into the stockpile site. The above costs exclude all permitting and engineering associated with the deepening project and exclude the cost to develop and operate the stockpile site (e.g., engineering design, environmental review, construction, permitting, and legal agreements). Note that the area of potential stockpile sites identified by filtering the land cover is vast, at 230,870 acres, or 360 square miles. Consequently, the capacity of these potential stockpile sites are not included in the above estimates because that quantity would be similarly vast and not useful for decision-making. An estimated capacity can be developed once a specific area is selected for further consideration.

## 8.2 Reuse (R) and Placement and Reuse (PR) Sites

The following summarizes the findings for PR sites (note that the estimated volumes could be higher as additional information becomes available):

- 38 PR sites that could consume approximately 26.5M cubic yards of dry dredged sediment. However, operators of 17 of these potential PR sites did not provide an estimated volume.
- 2 of these PR sites are associated with the Montezuma wetlands and rehandling facility and could consume 17M cubic yards.
- 35 are potential PR sites that could consume approximately 9.5M cubic yards of dry dredged sediment.

Of these 38 PR sites:

- 5 PR sites are located within 10,000 feet of the DWSC's Reach 1 and could consume at least approximately 2M cubic yards of dry dredged sediment, all at the Montezuma facility.
- 7 PR sites are located within 10,000 feet of the DWSC's Reach 2 and could consume at least approximately 1.9M cubic yards of dry dredged sediment.
- 1 PR site is located within 10,000 feet of the DWSC's Reach 3, but there is no information currently available estimating the volume of material needed. There are 2 PR sites are located within 20,000 feet of the DWSC's Reach 3 that could consume at least approximately 0.65M cubic yards of dry dredged sediment.
- 2 PR sites are located within 10,000 feet of the DWSC's Reach 4, but there is no information currently available estimating the volume of material needed. There are 11 PR sites located within 50,000 feet of the DWSC's Reach 4 that could consume at least approximately 2.9M cubic yards of dry dredged sediment.

- 0 PR sites are located within 50,000 feet of the DWSC's Reach 5.

There are an additional 18 sites identified as opportunities for only reuse with the potential to consume at least 12.6M cubic yards of dewatered sediment; including 3 potential reuse sites for which there is no estimated volume. Distances from the DWSC are not considered for reuse only sites because the delivery of sediment does not involve the dredge equipment.

The table below associates the reuse and PR sites with the types of reuse opportunities identified within the study area.

**Table 20: Summary of Reuse Sites**

| Reuse Type | Placement and Reuse Sites (PR) | | Reuse Only Sites (R) | |
|---|---|---|---|---|
| | No. Sites | Estimated cyds | No. Sites | Estimated cyds |
| Levees (island) | 18 | 5,632,000 | 10 | 1,961,000 |
| Shallowing of Channels | 2 | 882,000 | 0 | 0 |
| Habitat (upland) | 0 | 0 | 1 | 1,000,000 |
| Habitat (wetland) | 13 | 18,500,000 | 1 | 0 |
| Landfill Cover | 0 | 0 | 1 | 9,000,000 |
| Levees along rail lines | 0 | 0 | 0 | 0 |
| Construction fill | 2 | 1,480,000 | 5 | 657,600 |
| Subsidence Reversal | 3 | 60,000 | 0 | 0 |
| **Total** | **38** | **26,554,000** | **18** | **12,618,000** |

# 9. CONCLUSIONS AND RECOMMENDATIONS

The proposed project to deepen the Sacramento River DWSC is estimated to generate approximately 10M cubic yards of sediment. Assuming these sediments will be dredged, approximately 100M cubic yards of water will be included in the discharge of these sediments to facilities designed to receive them. Opportunities to stockpile and reuse sediments to be dredged by the proposed deepening of the Sacramento DWSC are shown on Figure 5 and were evaluated by collecting existing information and interviewing organizations with operations and interests in the Delta. These organizations include the Reclamation Districts, government agencies, water districts, and developers.

Engineering constraints, such as access and preliminary costs to deliver dredged sediment to stockpile facilities and beneficial reuse sites have been evaluated. Preliminary order of magnitude estimated costs range from an average of $7.15/cubic yard to dredge, pump, and discharge sediments and water to a facility within 10,000 feet of the dredge equipment, to and average of $21.25/cubic yard to pump and discharge the materials 50,000 feet. In addition, the potential permit processes and approvals that may be required prior to implementing the project have been

identified and generally described. In all cases, the engineering constraints, costs, permits, and approvals from the agencies and landowners will require additional definition as the project matures and alternatives are developed. These estimated costs require considerable refinement and should not be used for decision-making purposes or to develop budgets.

The sediments can be discharged from the dredge to two types of sites. Stockpile sites (existing or potential) will function as temporary facilities to receive the discharge, dewater the sediments, and make the sediments available for beneficial reuse. Placement and reuse sites (PR) will function as a turnkey facility that can also receive the dredge discharge, dewater the sediments, and then beneficially reuse the sediments within and/or at an immediately adjacent location. This report uses the term *total capacity* as that volume of sediment and water that can be held in a stockpile site, and *effective capacity* as that portion of the discharge that would be only sediment.

This investigation identified:

- 68 existing and potential stockpile sites. Of these, 48 sites offer an estimated total capacity of approximately 142M cubic yards, and an effective capacity for sediment of approximately 14M cubic yards. Operators of 18 of these stockpile sites have no estimated available capacity, either due to a lack of information or estimates provided herein based on topography.

- 38 potential placement and reuse sites. Of these, 21 PR sites could consume at approximately 26.5M cubic yards of dry dredged sediment, including 17M that could be delivered to the Montezuma wetland and rehandling facility. Operators of 17 potential PR sites did not provide an estimated volume.

- 18 potential beneficial reuse sites. Of these, 15 sites could consume approximately 12.6M cubic yards of dredged sediments. Operators of 3 potential reuse sites did not provide an estimated volume.

Sediments at a stockpile site would be transported by truck or barge to the beneficial reuse site, including a PR site. Preliminary estimated costs to transport dewatered sediment by truck range from $1.60 per cubic yard to locations within 2 miles of the stockpile, to $10 per cubic yard to locations 50 miles away. Estimated costs to barge dredged sediments from stockpile site to a reuse site 30 miles appear to be less competitive, at approximately $20 per cubic yard.

The geochemical and geotechnical quality of sediments to be dredged do not appear to pose a significant obstacle to stockpiling and beneficial reuse at upland facilities. However, the USACE report of these findings and the subsequent review and comment from the Regional Water Board is pending.

## 9.1 Comparison of Dredge Volume with Stockpile Opportunities

The total volume of sediment to be dredged, 10M cubic yards, is clearly exceeded by the available effective capacity of stockpile sites, 14M cubic yards, and PR sites 26.5M. The volume of sediments that could be beneficially reused, 12.6M cubic yards, also exceeds the estimated dredge volume. However, comparing these stockpile and PR opportunities with the volume of material to be dredged within each of the five reaches and with distance from the DWSC reveals a potential deficit of stockpile opportunities associated with reaches 4 and 5.

Using the information provided on Tables 8 through 12, Table 21 compares the stockpile and PR opportunities with the USACE estimates of sediment to be dredged from the DWSC. Based on the currently available information, this comparison reveals that the entire volume of sediment to be dredged within:

- DWSC reaches 1, 2, and 3 can be discharged to stockpile and PR sites within 10,000 feet of the channel.
- DWSC reach 2 may require discharge to stockpile sites that are approximately 20,000 feet from this portion of the channel, in the event the PR sites are not available.
- DWSC reach 4 may require discharge to stockpile and PR sites that are approximately 40,000 feet from this portion of the channel.
- DWSC reach 5 may require discharge to facilities that are greater than 50,000 feet from this portion of the channel.

Note that while Table 21 excludes the PR opportunity provided by the Montezuma rehandling facility, this location is too distant from reaches 4 and 5 to significantly affect the above observations. Also, because a stockpile or PR site may be within 10,000 feet of more than one Reach, its capacity or volume is considered available to more than one Reach. However, this double counting does not materially affect the above observations that there appears to be inadequate stockpiling opportunities proximal to DWSC reaches 4 and 5. This evaluation should be refined when developing sediment management alternatives, as recommended below.

## 9.2 Recommendations

The information collected, compiled, and interpreted above can be used to develop preliminary alternatives for stockpiling and reusing sediments to be dredged from the DWSC. These preliminary alternatives would consist of a collection of stockpile sites and placement and reuse sites that offer sufficient capacity to receive the discharge of sediment and water from the hydraulic dredge and then allow those dredged sediments to be subsequently beneficially reused.

The recommendations provided here assume that one of the project's important goals is to optimize the stockpiling of the dredged sediments with their subsequent reuse. Developing alternatives, or collections of stockpile, placement and reuse, and reuse sites, would likely seek to:

- Minimize the costs to dredge, transport, permit, stockpile, and reuse the dredged sediment,
- Minimize the environmental impacts associated with transporting and stockpiling the dredged sediment,
- Maximize the likelihood of approval from the landowner, regulatory agencies, and other critical stakeholders, to discharge dredged sediments and water to stockpile and placement and reuse (PR) sites,
- Maximize the opportunities to beneficially reuse the dredged sediment.

Once preliminary alternatives have been assembled, the feasibility and costs associated with the identified sites should be further assessed as tabulated below.

**Table 22: Recommendations to Support the Development of Alternatives**

| | Recommendation | Stockpile Sites | Placement and Reuse Sites | Reuse Sites |
|---|---|---|---|---|
| 1 | Refine estimates of total and effective capacity | ✓ | | |
| 2 | Refine estimates of total capacity and the volume to be reused | | ✓ | ✓ |
| 3 | Verify the lack of sensitive infrastructure and habitat that could be at risk | ✓ | ✓ | |
| 4 | Verify accessibility to discharge dredged sediment and water from the DWSC | ✓ | ✓ | |
| 5 | Verify accessibility to transport the dredged sediment from the site by truck and/or by barge | ✓ | | |
| 6 | Verify accessibility to rework the dredged sediment for beneficial reuse at the site, | | ✓ | |
| 7 | Identify impediments and incentives to obtaining landowner consent | ✓ | ✓ | |
| 8 | Identify site-specific issues related to permitting | ✓ | ✓ | |
| 9 | Identify site-specific engineering and geotechnical constraints | ✓ | ✓ | |
| 10 | Determine the likelihood and schedule of funding to support the reuse project | | | ✓ |
| 11 | Develop more accurate estimates of costs associated with the above | ✓ | ✓ | |

# REFERENCES

Applied Water Resources Corporation. 2009. Revised Proposal V2 – Placement and Beneficial Use Sites for Sacramento River and Stockton Deep Water Ship Channels. September. 2009.

Bray, RN, Bates, AD, and Land, JM. Dredging, a Handbook for Engineers, 2nd edition, Arnold Publishing, London, Sydney, Auckland. 1997

USACE. Draft Beneficial Use of Dredged Material: Definitions for Reporting in the Dredging Information System. November, 2009.

USACE. Geotechnical Factors in the Dredgeability of Sediments, Report No. 1, Geotechnical Descriptors for Sediments to be Dredged. 1993.

# TABLES

TABLE 1
RECLAMATION DISTRICTS and CONTACTS ASSOCIATED with the SACRAMENTO DEEP WATER SHIP CHANNLE

| Reclamation District | | RD Engineer Contact Information | | | | | | RD Contact (Other) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| RD No. | RD Name | Engineering Co. | Engineer | BusNum | CellNum | Status / Action | Met | Organization | Contact | Phone |
| 0003 | GRAND ISLAND | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | Accountant, Treasurer | Bruce Pisoni | 916-776-1945 |
| 0038 | STATEN ISLAND | DCC Engineering | Gilbert Labrie | 916-776-2277 | 707-486-5774 | complete | Y | Nature Conservancy | District Office | -- |
| 0141 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0146 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0150 | MERRITT ISLAND | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | Berry, Roger | -- |
| 0176 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0274 | DONLON ISLAND | Island is flooded | -- | -- | -- | -- | -- | DWR | none | -- |
| 0307 | LISBON DISTRICT | Kjeldsen, Sinnock & Neudeck | Chris Neudeck | 209-946-0268 | 209-481-0316 | complete | Y | -- | Borges, Jr., Joseph | -- |
| 0341 | SHERMAN ISLAND | Wagner & Bonsignore Engineers | Henry Matsunaga | 916-441-6850 | 916-417-5715 | complete | Y | DWR | Juan Mercado | 916 653 5620 |
| 0348 | NEW HOPE TRACT | Wagner & Bonsignore Engineers | Henry Matsunaga | 916-441-6850 | 916-417-5715 | complete | Y | -- | District Office | -- |
| 0349 | SUTTER ISLAND | DCC Engineering | Gilbert Labrie | 916-776-2277 | 707-486-5774 | complete | Y | -- | District Office | 916-775-1516 |
| 0369 | LIBBY MCNEIL | -- | Topper Van Lobensells | 916 439 3291 | -- | -- | -- | -- | Chu, Clarence | |
| 0501 | RYER ISLAND | Kjeldsen, Sinnock & Neudeck | Chris Neudeck | 209-946-0268 | 209-481-0316 | complete | Y | -- | District Office | -- |
| 0536 | EGBERT TRACT | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | District Office | 707-374-5478 |
| 0537 | LOVDAL DISTRICT | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0551 | PIERSON DISTRICT | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | District Office | 916-776-2544 |
| 0554 | WALNUT GROVE | DCC Engineering | Gilbert Labrie | 916-776-2277 | 707-486-5774 | complete | Y | Accountant, Trustee | Bruce Pisoni | 916-776-1945 |
| 0556 | UPPER ANDRUS ISLAND | -- | Bruce Pisoni / Accountant | 916-776-1945 | -- | left messages | -- | President | Kevin Stewart | 209-245-6617 |
| 0563 | TYLER ISLAND | Kjeldsen, Sinnock & Neudeck | Chris Neudeck | 209-946-0268 | 209-481-0316 | complete | Y | -- | District Office | -- |
| 0673 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 0744 | -- | Referred to : Sacramento County, Mark Scribner 916 247 8209, Russel VanLobensells | | | | left messages | -- | -- | District Office | -- |
| 0755 | RANDALL ISLAND | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | District Office | -- |
| 0756 | BOULDIN ISLAND | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | Delta Wetlands | Dave Forkel | 925 932 0251 |
| 0765 | GLIDE DISTRICT | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | District Office | 916-782-1177 |
| 0799 | HOTCHKISS TRACT | HDR | Blake Johnson | 916-817-4879 | -- | complete | Y | District | Angelia Tant | 925 684 3222 |
| 0813 | EHRHEARDT CLUB | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | District Office | -- |
| 0830 | JERSEY ISLAND | Milani Engineers | Jay Sheen | 925-685-6300 | -- | complete | Y | Ironhouse Sanitation | Tom Williams | -- |
| 0900 | WEST SACRAMENTO | -- | Kit Burton | 916-743-0413 | -- | left messages | -- | -- | District Office | -- |
| 0999 | NETHERLANDS | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | District Office | -- |
| 1000 | NATOMAS | -- | Paul Devereaux | -- | -- | left messages | -- | Sac Area Flood Control Asso | Stein Buer | -- |
| 1002 | GLANVILLE | DCC Engineering | Gilbert Labrie | 916-776-2277 | 707-486-5774 | complete | Y | District Office | Robert Abercrombie | 916 997 9644 |
| 1601 | TWITCHELL ISLAND | Kjeldsen, Sinnock & Neudeck | Chris Neudeck | 209-946-0268 | 209-481-0316 | complete | Y | DWR | Juan Mercado | 916 653 5620 |
| 1607 | VAN SICKLE ISLAND | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | District Office | -- |
| 1619 | BETHEL TRACT | Green Mountain Eng | Dominick Gulli | 925-685-6300 | -- | complete | Y | District | Steve Spence | 925 684 2210 |
| 1667 | PROSPECT ISLAND | -- | Lee Laurence | 916-978-5193 | -- | left messages | -- | -- | rgencies - CVCC (24 h | -- |
| 2022 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2023 | VENICE ISLAND | Kjeldsen, Sinnock & Neudeck | Chris Neudeck | 209-946-0268 | 209-481-0316 | complete | Y | -- | District Office | -- |
| 2026 | WEBB TRACT | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | Delta Wetlands | Dave Forkel | 925 932 0251 |
| 2059 | BRADFORD ISLAND | Green Mountain Eng | Dominick Gulli | 209-649-4555 | -- | complete | Y | -- | Gentry, Gary | -- |
| 2060 | HASTINGS TRACT | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | District Office | -- |
| 2067, 0317, 0407 | BRANNAN-ANDRUS | DCC Engineering | Gilbert Labrie | 916-776-2277 | 707-486-5774 | complete | Y | -- | -- | -- |
| 2068 | YOLANO | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | District Office | 707-678-5412 |
| 2084 | LOWER EGBERT TRACT | Referred to: Dante Nomellini, Paige Baldwin | | | | left messages | -- | -- | District Office | -- |
| 2086 | CANAL RANCH | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | District Office | -- |
| 2093 | LIBERTY ISLAND | -- | Erik Vink | erik.vink@TPL.org | -- | left messages | -- | Trust for Public Land | West, Phillip | 415-495-5660 |
| 2098 | CACHE HAAS AREA | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | District Office | 707-678-5412 |
| 2104 | PETERS POCKET | -- | Richard Silva / Tennent | 707 374 5269 | -- | left messages | -- | President and Attorney | Ken Machado | 408 280 7577 |
| 2110 | MCCORMACK-WILLIAMSON TRACT | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | Nature Conservancy | District Office | -- |
| 2111 | DEAD HORSE ISLAND | Kjeldsen, Sinnock & Neudeck | Chris Neudeck | 209-946-0268 | 209-481-0316 | complete | Y | Accountant | Bruce Pisoni | 916-776-1945 |
| 2122 | WINTER ISLAND | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | -- | | -- |
| 2127 | SIMMONS-WHEELER | GEI | Mark Fortner | 916-505-4106 | 916-631-4534 | complete | Y | -- | District Office | -- |
| 2130 | HONKER BAY | GEI | Mark Fortner | 916-505-4106 | 916-631-4534 | complete | Y | -- | District Office | -- |
| 2137 | DUTCH SLOUGH | MBK Engineers | Gilbert Cosio | 916-456-4400 | 916-761-1282 | complete | Y | DWR | Patty Quickert | 916 651 0851 |

Notes: -- : No information or unknwon

LM = Left Messages

**TABLE 3**
**ORGANIZATIONS CONTACTED TO IDENTIFY POSSIBLE STOCKPILE AND REUSE SITES**

| Organization Type | Organization | Projects | Stockpile | Reuse |
|---|---|---|---|---|
| Corporate | Aqua Clear Farms | Disposal, Treatment Unit (in situ) | No | No |
| Corporate | Barajas Tree Farm | Composting, Composting Operation (Ag); Composting, Composting Operation (Ag) | No | No |
| Corporate | CCW Wood Chipping / Grinding | Composting, Chipping and Grinding Activity Fac./ Op. | No | No |
| Corporate | D.R. Horton | Discovery Bay, Vacaville, Sacramento (Laguna Pointe Condominiums) | No | No |
| Corporate | Davis Waste Removal`s Green Material Op. | Composting, Chipping and Grinding Activity Fac./ Op. | No | No |
| Corporate | Delta Wetlands, a CA Corp – Semitropic Water Storage District - WDS | Delta Wetlands - Bacon, Bouldin, Webb, Holland Islands | Yes | Yes |
| Corporate | Dow Wetlands Preserve Community Outreach | Dow Wetlands Preserve | No | Yes |
| Corporate | Jepson Prairie Organics Composting Fac | Composting, Composting Facility (Green Waste);Disposal, ACW Disposal Site; Disposal, Solid Waste Landfill | No | No |
| Corporate | K&M Recycling Recycle America Alliance | Composting, Composting Facility (Green Waste) | No | No |
| Corporate | Keller Canyon Landfill | Disposal, Solid Waste Landfill | No | No |
| Corporate | Levine-Fricke Restoration Corp. | Montezuma Wetlands LLC | Yes | Yes |
| Corporate | National Pipeline Mapping Service (NPMS) | Maps of Delta Pipelines | No | No |
| Corporate | NUCP, LLC, New Urban Communities Partners | | Yes | Yes |
| Corporate | Pacific Gas & Electric (PG&E) | Transmission Tower Setbacks (height of tower?) 1100' apart. GIS of transmission lines. | No | No |
| Corporate | Shea Homes | Hotchkiss Island 600+ acre development. Others? | Yes | Yes |
| Corporate | SunCal | Sacramento Delta Shores Land Development | No | No |
| Corporate | USS-Posco Industries Waste Mgmt Unit II | Disposal, Solid Waste Landfill | No | No |
| Corporate | Wildlands Inc. | Holland Tract Restoration Project | No | No |
| Educational Institution | Los Mendanos College | | No | No |
| Government - City | Antioch - Engineering and Development Services Division | | No | No |
| Government - City | Antioch - Parks | | No | No |
| Government - City | Brentwood - Community Development | | No | No |
| Government - City | Brentwood - Engineering Division | | No | No |
| Government - City | Brentwood - Parks and Recreation | | No | No |
| Government - City | Oakley - Public Works & Engineering | includes park infrastructure | No | No |
| Government - City | Oakley, Community Development | | No | No |
| Government - City | Pittsburg - Engineering Department | | No | No |
| Government - City | Pittsburg - Planning Department | | No | No |
| Government - City | Rio Vista - (Rio Vista Municipal Airport) | | No | No |
| Government - City | Rio Vista - Community Development | Shoreline erosion replacement and levee repair. | Yes | Yes |
| Government - City | Stockton - Municipal Utilities | | No | No |
| Government - City | West Sacramento - Community Development | | No | No |

## TABLE 3
## ORGANIZATIONS CONTACTED TO IDENTIFY POSSIBLE STOCKPILE AND REUSE SITES

| Organization Type | Organization | Projects | Stockpile | Reuse |
|---|---|---|---|---|
| Government - City | West Sacramento Levee Improvements Program | Improve 50 miles of levees to achieve 200-ear flood protection _ recreational elements. | No | No |
| Government - County | Contra Costa County - CCC Flood Control and Water Conservation District | | No | No |
| Government - County | Contra Costa County - Community Development Department | E. CCC Habitat Conservancy | No | No |
| Government - County | Contra Costa County - Department of Conservation and Development | | No | No |
| Government - County | Contra Costa County - Public Works | | No | No |
| Government - County | Sacramento County - Municipal Services Agency - DOT, Planning Division | | No | No |
| Government - County | Sacramento County - MSA - Planning and Community Development Depart. | | No | No |
| Government - County | Sacramento County - Planning & Public Works | | No | No |
| Government - County | San Joaquin County - Community Development Planning Division | | No | No |
| Government - County | San Joaquin County - Parks | | No | No |
| Government - County | San Joaquin County Agricultural Commissioner | Farm Field Mapping | No | No |
| Government - County | San Joaquin County Channel Maintenance | Used for erosion repair. | No | No |
| Government - County | Solano County - Engineering, Road Department | Roads. | No | Yes |
| Government - County | Solano County - Parks | Parks | No | No |
| Government - County | Solano County Water Agency | North Bay Aqueduct, other uses | No | No |
| Government - County | Solano County, Division of Architectural Services | Parks and other capital improvements | No | No |
| Government - County | Yolo County Central Landfill | Composting, Composting Facility (Green Waste); Disposal, Solid Waste Landfill; Composting, Chipping and Grinding Activity Fac./ Op. | Yes | Yes |
| Government - Federal | Bureau of Land Management | Consumnes River Preserve | No | No |
| Government - Federal | Natural Resources Conservation Service - Yolo | Land Management, Farm Service Agency, NRCS, RCD | No | No |
| Government - Federal | Resource Conservation Districts - Contra Costa | Land Management, NRCS, RCD | No | No |
| Government - Federal | US Army Corps of Engineers - Sacramento | Levees and Cache Creek Settling Basin | No | No |
| Government - Federal | US Bureau of Reclamation - SCCAO, South-Central California Area Office | Contra Loma Reservoir Expansion and 2 Dikes | No | No |
| Government - Federal | US Fish and Wildlife Service | Bay Delta Conservation Plan for the Sacramento-San Joaquin Delta, CA; Shin Kee Tract | Yes | Yes |
| Government - Federal | US Fish and Wildlife Service | | No | No |
| Government - Federal | US Fish and Wildlife Service | Antioch Dunes National Wildlife Refuge | No | Yes |
| Government - Federal | US Fish and Wildlife Service | Stone Lakes National Wildlife Refuge | No | No |
| Government - Special District | BART | eBART extension, Pittsburg to Antioch, (and Antioch to Tracy - not anticipated, cannot get right of way) | No | No |
| Government - Special District | Bay Conservation and Development Commisssion (BCDC) | Regional Sediment Management Plan - LTMS | No | No |
| Government - Special District | Contra Costa County Water Agency | San Francisco - Stockton Deep Water Ship Channel Deepening Project | No | No |

## TABLE 3
## ORGANIZATIONS CONTACTED TO IDENTIFY POSSIBLE STOCKPILE AND REUSE SITES

| Organization Type | Organization | Projects | Stockpile | Reuse |
|---|---|---|---|---|
| Government - Special District | Contra Costa Transportation Authority | eBART extension and Freeway Expansion | No | No |
| Government - Special District | Contra Costa Water District | Contra Costa Canal | Yes | Yes |
| Government - Special District | East Bay Municipal Utility District (EBMUD) | Mokelumne Aqueduct and protecting levees. | No | No |
| Government - Special District | East Bay Regional Park District | Regional Parks | No | No |
| Government - Special District | East Contra Costa County Habitat Conservancy | East Contra Costa County HCP/NCCP Preserve System | No | No |
| Government - Special District | FLOODsafe | | No | No |
| Government - Special District | State Route 4 Bypass Authority | State Route 4 Bypass Oakley to Brentwood | Yes | Yes |
| Government - State | California Department of Fish and Game | Wildlife Areas | No | No |
| Government - State | California Department of Fish and Game | Protected habitat | N/A | N/A |
| Government - State | California Parks and Recreation | State Parks | No | No |
| Government - State | California State Lands Commission | Landowner | No | No |
| Government - State | CalTrans - District 10 - San Joaquin | All highway projects | No | No |
| Government - State | CalTrans - District 3 - Sacramento and Yolo | All projects | No | No |
| Government - State | Caltrans - District 4 - Solano and Contra Costa counties | | No | No |
| Government - State | Coastal Conservancy | Dutch Slough - covered by DWR Patty Quickert. | No | No |
| Government - State | Delta Protection Commission | Great California Delta Trail Plan, Delta Working Landscapes - Ducks Unlimited (Jeff Hart - Hart Restoration) Lower Yolo Bypass | No | No |
| Government - State | Department of Water Resources | Dutch Slough Tidal Restoration Project | Yes | Yes |
| Government - State | DWR - Bay Delta Conservation Plan (BDCP) | Wetland creation | Yes | Yes |
| Government - State | DWR - Levee Evaluation Program | Levee Repair and Maintenance; Annual Inspections | No | No |
| NGO | Ducks Unlimited | Cullinan Ranch (NE end of Mare Island, N. of Highway 37) | No | No |
| NGO | Natural Heritage Institute | Delta Restoration | No | No |
| NGO | Resource Conservation Districts - Sacramento | Land Management, Rural Development, NRCS, | No | No |
| NGO | Resource Conservation Districts - Solano | Land Management, Farm Service Agency, NRCS | No | No |

TABLE 4
EXISTING AND POTENTIAL DREDGED SEDIMENT STOCKPILE AND REUSE SITES - SACRAMENTO DWSC

| Site Type and Name | | | | | | Volume and Capacity Information | | | | | | | | Access Information | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site Type | Reuse Type | Existing Site | Map Label | Island or Location | Feature Name | Estimated Total Capacity or Volume to be Reused | Area | Lowest Elevation of Adjacent Top of Levee [2] | Minimum Distance between Levee and Placed Sediment & Water (estimate) [3] | Maximum Top of Placement Site (calculated) | Approximate Average Elevation Land Surface [2] | Max Available Thickness of Placement Site (calculated) | Information Source | Distance from DWSC (straight line) | Distance from DWSC (within channels) | Distance from Paved Road | Water Depth (draft) in Adjanent Channel [4] |
| | | | | | | cubic yards | acres | meters, msl | meters | meters, msl | meters, msl | meters | | feet | feet | feet | feet |
| S | -- | ✓ | BD | BRADFORD ISLAND | Bradford Island | 0 | 494 | 3.0 | 4.0 | -1.0 | -1.0 | 0.0 | Calculation | 1,000 | 1,000 | 0 | 30 |
| S | -- | -- | BD-P1 | BRADFORD ISLAND | Bradford Island P1 | 0 | 191 | 3.0 | 4.0 | -1.0 | -1.0 | 0.0 | Calculation | 1,000 | 1,000 | 100 | 30 |
| S | -- | ✓ | BD-P2 | BRADFORD ISLAND | Bradford Island P2 | 0 | 65 | 3.0 | 4.0 | -1.0 | -1.0 | 0.0 | Calculation | 1,400 | 1,400 | 100 | 30 |
| S | -- | -- | BD-P3 | BRADFORD ISLAND | Bradford Island P3 | 0 | 205 | 3.0 | 4.0 | -1.0 | -1.0 | 0.0 | Calculation | 1,400 | 1,400 | 100 | 30 |
| S | -- | -- | BI-P1 | BOULDIN ISLAND | Bouldin Island P1 | 4,500,000 | 356 | 3.0 | 4.0 | -1.0 | -3.0 | 2.0 | Calculation | 1,000 | 1,000 | 5,000 | 30 |
| S | -- | -- | BI-P2 | BOULDIN ISLAND | Bouldin Island P2 | 1,800,000 | 141 | 3.0 | 4.0 | -1.0 | -3.0 | 2.0 | Calculation | 8,000 | 11,000 | 10,000 | 30 |
| S | -- | -- | BR-P1 | BRANNAN-ANDRUS | Brannan Island P1 | 2,800,000 | 151 | 5.0 | 4.0 | 1.0 | -2.0 | 3.0 | Calculation | 1,800 | 1,800 | 0 | 30 |
| S | -- | -- | BR-P2 | BRANNAN-ANDRUS | Brannan Island P2 | 700,000 | 112 | 0.0 | 4.0 | -4.0 | -5.0 | 1.0 | Calculation | 11,000 | 9,000 | 100 | 16 |
| S | -- | -- | BR-P3 | BRANNAN-ANDRUS | Brannan Island P3 | 10,700,000 | 423 | 3.0 | 4.0 | -1.0 | -5.0 | 4.0 | Calculation | 9,000 | 9,000 | 100 | 16 |
| S | -- | -- | BR-P4 | BRANNAN-ANDRUS | Brannan Island P4 | 11,700,000 | 464 | 3.0 | 4.0 | -1.0 | -5.0 | 4.0 | Calculation | 9,000 | 9,000 | 100 | 16 |
| S | -- | -- | BR-P5 | BRANNAN-ANDRUS | Brannan Island P5 | 4,500,000 | 180 | 3.0 | 4.0 | -1.0 | -5.0 | 4.0 | Calculation | 4,000 | 4,000 | 50 | 16 |
| S | -- | -- | BR-P6 | BRANNAN-ANDRUS | Brannan Island P6 | 1,500,000 | 120 | 3.0 | 4.0 | -1.0 | -3.0 | 2.0 | Calculation | 2,000 | 2,000 | 0 | 30 |
| S | -- | ✓ | BRRA | BRANNAN-ANDRUS | Brannan Isl Recreation Area | 0 | 307 | 5.0 | 4.0 | 1.0 | 7.0 | -6.0 | Calculation | 1,600 | 1,600 | 0 | 30 |
| S | -- | -- | CR-P1 | CANAL RANCH | Canal Ranch P1 | 3,700,000 | 197 | 3.0 | 2.0 | 1.0 | -2.0 | 3.0 | Calculation | 48,000 | 72,000 | 12,000 | 22 |
| S | -- | -- | DH-P1 | DEAD HORSE ISLAND | Dead Horse Island P1 | 5,200,000 | 205 | 5.0 | 2.0 | 3.0 | -1.0 | 4.0 | Calculation | 47,000 | 73,000 | 1,600 | 20 |
| S | -- | -- | GI-P1 | GRAND ISLAND | Grand Island P1 | 2,300,000 | 121 | 6.0 | 2.0 | 4.0 | 1.0 | 3.0 | Calculation | 3,000 | 3,000 | 0 | 13 |
| S | -- | -- | HB-P1 | HONKER BAY | Honker Bay P1 | 10,000 | 5 | -- | -- | -- | -- | -- | GEI | 11,000 | 11,000 | 9,000 | 7 |
| S | -- | -- | HB-P2 | -- | Honker Bay P2 | 200,000 | 17 | 3.0 | 1.0 | 2.0 | 0.0 | 2.0 | Calculation | 15,000 | 11,000 | 5,000 | 7 |
| S | -- | -- | HB-P3 | -- | Honker Bay P3 | 1,000,000 | 82 | 3.0 | 1.0 | 2.0 | 0.0 | 2.0 | Calculation | 14,000 | 11,000 | 5,000 | 7 |
| S | -- | -- | HB-P4 | -- | Honker Bay P4 | 1,000,000 | 78 | 3.0 | 1.0 | 2.0 | 0.0 | 2.0 | Calculation | 17,000 | 11,000 | 2,000 | 7 |
| S | -- | -- | HB-P5 | -- | Honker Bay P5 | 0 | 0.1 | 3.0 | 1.0 | 2.0 | 0.0 | 2.0 | Calculation | 17,000 | 11,000 | 3,000 | 7 |
| S | -- | -- | JI-P1 | JERSEY ISLAND | Jersey Island P1 | 750,000 | 117 | -- | -- | -- | -- | -- | Milani Engineers | 12,000 | 29,000 | 0 | 35 |
| S | -- | ✓ | MPPS | SHERMAN ISLAND | Sherman McCormack Pit | 6,300,000 | 335 | 3.0 | 4.0 | -1.0 | -4.0 | 3.0 | Calculation | 2,000 | 2,000 | 2,200 | 35 |
| S | -- | -- | NH-P1 | NEW HOPE TRACT | New Hope Tract P1 | 3,400,000 | 270 | 6.0 | 3.0 | 3.0 | 1.0 | 2.0 | Calculation | 60,000 | 101,000 | 0 | 14 |
| S | -- | -- | NH-P2 | NEW HOPE TRACT | New Hope Tract P2 | 2,300,000 | 357 | 5.0 | 3.0 | 2.0 | 1.0 | 1.0 | Calculation | 55,000 | 92,000 | 0 | 16 |
| S | -- | -- | NH-P3 | NEW HOPE TRACT | New Hope Tract P3 | 3,400,000 | 532 | 5.0 | 3.0 | 2.0 | 1.0 | 1.0 | Calculation | 53,000 | 83,000 | 0 | 14 |
| S | -- | -- | NH-P4 | NEW HOPE TRACT | New Hope Tract P4 | 0 | 444 | 2.0 | 3.0 | -1.0 | 1.0 | -2.0 | Calculation | 59,000 | 90,000 | 150 | 16 |
| S | -- | -- | NH-P5 | NEW HOPE TRACT | New Hope Tract P5 | 0 | 617 | 2.0 | 3.0 | -1.0 | 1.0 | -2.0 | Calculation | 51,000 | 79,000 | 150 | 24 |
| S | -- | -- | NH-P6 | NEW HOPE TRACT | New Hope Tract P6 | 0 | 844 | 2.0 | 3.0 | -1.0 | 1.0 | -2.0 | Calculation | 54,000 | 92,000 | 150 | 14 |
| S | -- | ✓ | RV-P1 | RIO VISTA | Rio Vista P1 | 4,000,000 | 84 | -- | -- | -- | -- | -- | Asta Construction Co. | 2,000 | 2,000 | 0 | 35 |
| S | -- | ✓ | RV-P2 | RIO VISTA | Rio Vista P2 | 280,000 | 13 | -- | -- | -- | -- | -- | Asta Construction Co. | 1,500 | 1,500 | 0 | 35 |
| S | -- | ✓ | S-11 | PROSPECT ISLAND | S-11 Prospect Island | 190,000 | 184 | -- | -- | -- | -- | -- | 3001 Inc. | 500 | 500 | 500 | 30 |
| S | -- | ✓ | S-12 | PROSPECT ISLAND | S-12 Prospect Island | 160,000 | 284 | -- | -- | -- | -- | -- | 3001 Inc. | 400 | 400 | 950 | 30 |
| S | -- | ✓ | S-13 | -- | S-13 | 0 | 31 | 7.0 | 2.0 | 5.0 | 6.0 | -1.0 | Calculation | 6,000 | 6,000 | 0 | 30 |
| S | -- | former | S-14 | GRAND ISLAND | S-14 Grand Island | 890,000 | 91 | -- | -- | -- | -- | -- | 3001 Inc. | 900 | 900 | 1,800 | 30 |
| S | -- | ✓ | S-16 | -- | S-16 Rio Vista | 650,000 | 136 | -- | -- | -- | -- | -- | 3001 Inc. | 1,500 | 1,500 | 1,300 | 30 |
| S | -- | ✓ | S-19 | -- | S-19 Decker Island | 1,410,000 | 173 | -- | -- | -- | -- | -- | 3001 Inc. | 1,500 | 1,500 | 0 | 30 |
| S | -- | ✓ | S-20 | SHERMAN ISLAND | S-20 Augusto Pit | 430,000 | 91 | -- | -- | -- | -- | -- | 3001 Inc. | 1,500 | 1,500 | 0 | 30 |
| S | -- | ✓ | S-31 | -- | S-31 Port of West Sac | 0 | 897 | 8.0 | 2.0 | 6.0 | 8.0 | -2.0 | Calculation | 500 | 500 | 0 | 30 |
| S | -- | ✓ | S-31a | -- | S-31a Port of West Sac | 0 | 190 | 8.0 | 2.0 | 6.0 | 8.0 | -2.0 | Calculation | 450 | 450 | 1,300 | 30 |
| S | -- | ✓ | S-32-1 | -- | S-32-1 | 5,000 | 11 | -- | -- | -- | -- | -- | 3001 Inc. | 450 | 450 | 20 | 30 |
| S | -- | ✓ | S-32-2 | NETHERLANDS | S-32-2 | 5,000 | 10 | -- | -- | -- | -- | -- | 3001 Inc. | 450 | 450 | 50 | 30 |
| S | -- | ✓ | S-32-3 | NETHERLANDS | S-32-3 | 5,000 | 7 | -- | -- | -- | -- | -- | 3001 Inc. | 900 | 900 | 0 | 30 |
| S | -- | ✓ | S-32-4 | NETHERLANDS | S-32-4 | 5,000 | 126 | -- | -- | -- | -- | -- | 3001 Inc. | 450 | 450 | 0 | 30 |
| S | -- | ✓ | S-32-5 | NETHERLANDS | S-32-5 | 5,000 | 40 | -- | -- | -- | -- | -- | 3001 Inc. | 450 | 450 | 0 | 30 |

TABLE 4
EXISTING AND POTENTIAL DREDGED SEDIMENT STOCKPILE AND REUSE SITES - SACRAMENTO DWSC

| Site Type and Name | | | | | | Volume and Capacity Information | | | | | | | | Access Information | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site Type | Reuse Type | Existing Site | Map Label | Island or Location | Feature Name | Estimated Total Capacity or Volume to be Reused | Area | Lowest Elevation of Adjacent Top of Levee [2] | Minimum Distance between Levee and Placed Sediment & Water (estimate) [3] | Maximum Top of Placement Site (calculated) | Approximate Average Elevation Land Surface [2] | Max Available Thickness of Placement Site (calculated) | Information Source | Distance from DWSC (straight line) | Distance from DWSC (within channels) | Distance from Paved Road | Water Depth (draft) in Adjanent Channel [4] |
| | | | | | | cubic yards | acres | meters, msl | meters | meters, msl | meters, msl | meters | | feet | feet | feet | feet |
| S | -- | ✓ | S-32-6 | -- | S-32-6 | 5,000 | 44 | -- | -- | -- | -- | -- | 3001 Inc. | 450 | 450 | 50 | 30 |
| S | -- | ✓ | S-35 | -- | S-35 Montezuma Hills | 210,000 | 200 | -- | -- | -- | -- | -- | 3001 Inc. | 2,000 | 2,000 | 0 | 30 |
| S | -- | ✓ | S-35a | -- | S-35a Montezuma Hills | 0 | 81 | 3.0 | 3.0 | 0.0 | 5.0 | -5.0 | Calculation | 1,500 | 1,500 | 0 | 30 |
| S | -- | ✓ | S-4 | WEST SACRAMENTO | S-4 | 3,500,000 | 112 | 9.0 | 2.0 | 7.0 | 2.0 | 5.0 | Calculation | 900 | 1,000 | 20 | 4 |
| S | -- | ✓ | S-7 | NETHERLANDS | S-7 | 1,400,000 | 224 | 5.0 | 3.0 | 2.0 | 1.0 | 1.0 | Calculation | 800 | 800 | 50 | 30 |
| S | -- | ✓ | S-9 | NETHERLANDS | S-9 | 1,500,000 | 59 | 7.0 | 2.0 | 5.0 | 1.0 | 4.0 | Calculation | 900 | 900 | 150 | 30 |
| S | -- | ✓ | SL | SHERMAN LAKE | Sherman Lake | 0 | 533 | 0.0 | 1.0 | -1.0 | 0.0 | -1.0 | Calculation | 2,800 | 2,800 | 0 | 24 |
| S | -- | ✓ | SPPS | SHERMAN ISLAND | Sherman Scour Pond | 4,300,000 | 339 | 3.0 | 4.0 | -1.0 | -3.0 | 2.0 | Calculation | 1,000 | 1,000 | 0 | 35 |
| S | -- | former | SW-P1 | SIMMONS-WHEELER | Simmons-Wheeler P1 | 300,000 | 26 | 3.0 | 1.0 | 2.0 | 0.0 | 2.0 | Calculation | 1,000 | 1,000 | 16,000 | 30 |
| S | -- | ✓ | SX-P1 | -- | SX | 0 | 93 | 3.0 | 2.0 | 1.0 | 2.0 | -1.0 | Calculation | 1,500 | 1,500 | 0 | 30 |
| S | -- | -- | TI-P1 | TWITCHELL ISLAND | Twitchell Island P1 | 100,000 | 24 | 3.0 | 4.0 | -1.0 | -2.0 | 1.0 | Calculation | 1,500 | 1,500 | 0 | 35 |
| S | -- | -- | TI-P2 | TWITCHELL ISLAND | Twitchell Island P2 | 0 | 9 | 4.0 | 4.0 | 0.0 | 1.0 | -1.0 | Calculation | 1,300 | 2,000 | 5,000 | 35 |
| S | -- | -- | TY-P1 | TYLER ISLAND | Tyler Island P1 | 9,000,000 | 475 | 4.0 | 4.0 | 0.0 | -3.0 | 3.0 | Calculation | 19,000 | 28,000 | 125 | 26 |
| S | -- | -- | TY-P2 | TYLER ISLAND | Tyler Island P2 | 19,800,000 | 1,045 | 4.0 | 4.0 | 0.0 | -3.0 | 3.0 | Calculation | 16,000 | 27,000 | 125 | 26 |
| S | -- | -- | TY-P3 | TYLER ISLAND | Tyler Island P3 | 6,300,000 | 333 | 4.0 | 4.0 | 0.0 | -3.0 | 3.0 | Calculation | 12,000 | 19,000 | 125 | 30 |
| S | -- | -- | TY-P4 | TYLER ISLAND | Tyler Island P4 | 9,600,000 | 509 | 4.0 | 4.0 | 0.0 | -3.0 | 3.0 | Calculation | 11,000 | 20,000 | 125 | 30 |
| S | -- | -- | VI-P1 | VENICE ISLAND | Venice Island P1 | 100,000 | 11 | 3.0 | 3.0 | 0.0 | -2.0 | 2.0 | Calculation | 1,500 | 1,500 | 400 | 35 |
| S | -- | -- | VS-P1 | VAN SICKLE ISLAND | Van Sickle Island P1 | 3,100,000 | 329 | 3.0 | 1.5 | 1.5 | 0.0 | 1.5 | Calculation | 1,800 | 1,800 | 4,000 | 35 |
| S | -- | -- | WG-P1 | WALNUT GROVE | Walnut Grove P1 | 700,000 | 108 | 6.0 | 4.0 | 2.0 | 1.0 | 1.0 | Calculation | 46,000 | 72,000 | 0 | 18 |
| S | -- | ✓ | WS-P1 | WEST SACRAMENTO | West Sacramento P1 | 0 | 57 | 6.0 | 2.0 | 4.0 | 4.0 | 0.0 | Calculation | 300 | 300 | 0 | 30 |
| S | -- | ✓ | WS-P2 | WEST SACRAMENTO | West Sacramento P2 | 0 | 72 | 6.0 | 2.0 | 4.0 | 4.0 | 0.0 | Calculation | 700 | 700 | 0 | 30 |
| S | -- | -- | WT-P1 | WEB TRACT | Webb Tract P1 | 2,700,000 | 215 | 3.0 | 4.0 | -1.0 | -3.0 | 2.0 | Calculation | 1,000 | 1,000 | 0 | 35 |
| S | -- | -- | WT-P2 | WEB TRACT | Webb Tract P2 | 3,900,000 | 311 | 3.0 | 4.0 | -1.0 | -3.0 | 2.0 | Calculation | 1,400 | 1,400 | 0 | 35 |
| PR | L | -- | BD-PR1 | BRADFORD ISLAND | Bradford Island PR1 | 150,000 | 33 | -- | -- | -- | -- | -- | Thomas Rosten | 1,000 | 1,000 | 0 | 30 |
| PR | L | -- | BD-PR2 | BRADFORD ISLAND | Bradford Island PR2 | 250,000 | 82 | -- | -- | -- | -- | -- | Thomas Rosten | 1,000 | 1,000 | 0 | 30 |
| PR | SR | -- | BR-PR1 | BRANNAN-ANDRUS | Brannan Island PR1 | 50,000 | 321 | -- | -- | -- | -- | -- | DCC Engineering | 8,000 | 8,000 | 50 | 30 |
| PR | SC | -- | BR-PR2 | BRANNAN-ANDRUS | Brannan Island PR2 | 600,000 | 32 | -- | -- | -- | -- | -- | DCC Engineering | -- | -- | 0 | 10 |
| PR | HW | -- | DS-PR1 | DUTCH SLOUGH | Dutch Slough PR1 | 1,000,000 | 793 | -- | -- | -- | -- | -- | MBK Engineers | 12,000 | 19,000 | 0 | 23 |
| PR | L | -- | GL-PR1 | GLANVILLE | Glanville PR1 | 450,000 | 123 | -- | -- | -- | -- | -- | DCC Engineering | 48,000 | 120,000 | 0 | 13 |
| PR | HW | -- | GL-PR2 | GLANVILLE | Glanville PR2 | -- | 382 | 6.0 | -- | -- | 0.0 | -- | -- | 48,000 | 122,000 | 0 | 22 |
| PR | SR | -- | HB-PR1 | HONKER BAY | Honker Bay PR1 | 10,000 | 2 | -- | -- | -- | -- | -- | GEI | -- | -- | 9,000 | 5 |
| PR | L | -- | HT-PR1 | HOTCHKISS TRACT | Hotchkiss Tract PR1 | -- | 283 | 3.0 | -- | -- | 0.0 | -- | -- | 15,000 | 23,000 | 0 | 21 |
| PR | HW | -- | HT-PR2 | HOTCHKISS TRACT | Hotchkiss Tract PR2 | 500,000 | 404 | -- | -- | -- | -- | -- | DWR | 15,000 | 23,000 | 0 | 21 |
| PR | SR | -- | JI-PR1 | JERSEY ISLAND | Jersey Island PR1 | -- | 588 | 3.0 | -- | -- | -2.0 | -- | -- | 1,600 | 1,600 | 0 | 35 |
| PR | L | -- | JI-PR2 | JERSEY ISLAND | Jersey Island PR2 | -- | 27 | 3.0 | -- | -- | -1.0 | -- | -- | 1,000 | 1,000 | 0 | 35 |
| PR | L | -- | JI-PR3 | JERSEY ISLAND | Jersey Island PR3 | -- | 129 | 3.0 | -- | -- | -1.0 | -- | -- | 3,500 | 3,500 | 0 | 35 |
| PR | L | -- | JI-PR4 | JERSEY ISLAND | Jersey Island PR4 | -- | 59 | 3.0 | -- | -- | -1.0 | -- | -- | 7,000 | 12,000 | 0 | 35 |
| PR | HW | ✓ | MT-PR1 | MONTEZUMA | Montezuma PR1 | 2,000,000 | 209 | -- | -- | -- | -- | -- | 3001 Inc. | 3,500 | 3,500 | 0 | 30 |
| PR | HW | ✓ | MT-PR2 | MONTEZUMA | Montezuma PR2 | 15,000,000 | 2,503 | -- | -- | -- | -- | -- | 3001 Inc. | 3,500 | 3,500 | 0 | 30 |
| PR | HW | -- | MT-PR3 | MONTEZUMA | Montezuma PR3 | -- | 578 | 3.0 | -- | -- | 0.0 | -- | -- | 25,000 | 20,000 | 100 | 6 |
| PR | HW | -- | MW-PR1 | MCCORMACK-WILMSN TRACT | McCrmck-Wllmsn Tract PR1 | -- | 562 | 5.0 | -- | -- | 1.0 | -- | -- | 48,000 | 115,000 | 0 | 13 |
| PR | SC | -- | NB-PR1 | -- | NUCP Burroughs PR1 | 282,000 | 62 | -- | -- | -- | -- | -- | Contra Costa Water District | 15,000 | 27,000 | 0 | 7 |
| PR | CF | -- | NB-PR2 | -- | NUCP Burroughs PR2 | 480,000 | 44 | -- | -- | -- | -- | -- | NUCP LLC | 22,000 | 26,000 | 0 | 6 |
| PR | L | -- | NH-PR1 | NEW HOPE TRACT | New Hope Tract PR1 | 282,000 | 293 | 3.0 | -- | -- | -1.0 | -- | -- | 46,000 | 80,000 | 0 | 24 |
| PR | HW | -- | NH-PR2 | NEW HOPE TRACT | New Hope Tract PR2 | -- | 7,733 | 3.0 | -- | -- | 1.0 | -- | -- | 62,000 | 109,000 | 0 | 10 |

TABLE 4
EXISTING AND POTENTIAL DREDGED SEDIMENT STOCKPILE AND REUSE SITES - SACRAMENTO DWSC

| Site Type and Name | | | | | | Volume and Capacity Information | | | | | | | | Access Information | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site Type | Reuse Type | Existing Site | Map Label | Island or Location | Feature Name | Estimated Total Capacity or Volume to be Reused | Area | Lowest Elevation of Adjacent Top of Levee [2] | Minimum Distance between Levee and Placed Sediment & Water (estimate) [3] | Maximum Top of Placement Site (calculated) | Approximate Average Elevation Land Surface [2] | Max Available Thickness of Placement Site (calculated) | Information Source | Distance from DWSC (straight line) | Distance from DWSC (within channels) | Distance from Paved Road | Water Depth (draft) in Adjanent Channel [4] |
| | | | | | | cubic yards | acres | meters, msl | meters | meters, msl | meters, msl | meters | | feet | feet | feet | feet |
| PR | HW | -- | PP-PR1 | PP, HT, ET | Peters Pocket PR1 | -- | 33,707 | -- | -- | -- | -- | -- | -- | 3,000 | 3,000 | 0 | 30 |
| PR | CF | -- | SH-PR1 | HOTCHKISS TRACT | Shea Homes PR1 | 1,000,000 | 389 | -- | -- | -- | -- | -- | Shea Homes | 22,000 | 36,000 | 0 | 14 |
| PR | L | -- | SI-PR1 | SHERMAN ISLAND | Sherman Island PR1 | -- | 324 | 4.0 | -- | -- | -1.0 | -- | -- | 1,000 | 1,000 | 0 | 35 |
| PR | HW | -- | SI-PR2 | SHERMAN ISLAND | Sherman Island PR2 | -- | 781 | 5.0 | -- | -- | -1.0 | -- | -- | 2,300 | 2,300 | 0 | 35 |
| PR | L | -- | ST-PR1 | STATEN ISLAND | Staten Island PR1 | 650,000 | 488 | -- | -- | -- | -- | -- | DCC Engineering | 10,000 | 20,000 | 0 | 35 |
| PR | L | -- | TI-PR1 | TWITCHELL ISLAND | Twitchell Island PR1 | 1,700,000 | 140 | -- | -- | -- | -- | -- | Kjeldsen, Sinnock & Neudeck | 1,000 | 1,000 | 0 | 35 |
| PR | L | -- | TI-PR2 | TWITCHELL ISLAND | Twitchell Island PR2 | 1,000,000 | 118 | -- | -- | -- | -- | -- | Kjeldsen, Sinnock & Neudeck | 4,000 | 12,000 | 0 | 35 |
| PR | L | -- | TI-PR3 | TWITCHELL ISLAND | Twitchell Island PR3 | 300,000 | 21 | -- | -- | -- | -- | -- | Kjeldsen, Sinnock & Neudeck | 1,000 | 1,000 | 4,000 | 35 |
| PR | L | -- | VI-PR1 | VENICE ISLAND | Venice Island PR1 | 750,000 | 443 | -- | -- | -- | -- | -- | Kjeldsen, Sinnock & Neudeck | 500 | 500 | 0 | 35 |
| PR | L | -- | VS-PR1 | VAN SICKLE ISLAND | Van Sickle Island PR1 | -- | 31 | 3.0 | -- | -- | 0.0 | -- | -- | 1,800 | 1,800 | 0 | 35 |
| PR | HW | -- | VS-PR2 | VAN SICKLE ISLAND | Van Sickle Island PR2 | -- | 78,085 | 0.0 | -- | -- | 0.0 | -- | -- | 1,800 | 1,800 | 0 | 35 |
| PR | L | -- | WG-PR1 | WALNUT GROVE | Walnut Grove PR1 | 65,000 | 31 | -- | -- | -- | -- | -- | DCC Engineering | 47,000 | 75,000 | 0 | 18 |
| PR | L | -- | WG-PR2 | WALNUT GROVE | Walnut Grove PR2 | 35,000 | 14 | -- | -- | -- | -- | -- | DCC Engineering | 45,000 | 68,000 | 0 | 23 |
| PR | HW | ✓ | WI-PR1 | WINTER ISLAND | Winter Island PR1 | -- | 393 | 3.0 | -- | -- | 0.0 | -- | -- | 500 | 500 | 0 | 35 |
| PR | L | -- | WT-PR1 | WEB TRACT | Webb Tract PR1 | -- | 47 | 3.0 | -- | -- | 1.0 | -- | -- | 1,000 | 1,000 | 0 | 35 |
| PR | HW | -- | YB-PR1 | -- | Yolo Bypass PR1 | -- | 18,267 | -- | -- | -- | -- | -- | -- | 3,000 | 1,500 | 0 | 15 |
| R | HU | -- | AD-R1 | ANTIOCH DUNES | Antioch Dunes Wildlife R1 | 1,000,000 | 49 | -- | -- | -- | -- | -- | Antioch Dunes Manager | -- | -- | 0 | 35 |
| R | L | -- | BI-R1 | BOULDIN ISLAND | Bouldin Island R1 | -- | 66 | -- | -- | -- | -- | -- | MBK Engineers | -- | -- | 0 | 35 |
| R | HW | -- | DW-R1 | DOW WETLANDS PRESERVE | Dow Wetlands Preserve R1 | -- | 165 | -- | -- | -- | -- | -- | -- | -- | -- | 0 | 35 |
| R | L | -- | HB-R1 | HONKER BAY | Honker Bay R1 | 60,000 | 5 | -- | -- | -- | -- | -- | GEI | -- | -- | 5,000 | 5 |
| R | L | -- | JI-R1 | JERSEY ISLAND | Jersey Island R1 | 250,000 | 4 | -- | -- | -- | -- | -- | Milani Engineers | -- | -- | 0 | 35 |
| R | L | -- | JI-R2 | JERSEY ISLAND | Jersey Island R2 | 475,000 | 11 | -- | -- | -- | -- | -- | Milani Engineers | -- | -- | 0 | 35 |
| R | L | -- | JI-R3 | JERSEY ISLAND | Jersey Island R3 | 475,000 | 11 | -- | -- | -- | -- | -- | Milani Engineers | -- | -- | 0 | 10 |
| R | L | -- | JI-R4 | JERSEY ISLAND | Jersey Island R4 | 500,000 | 11 | -- | -- | -- | -- | -- | Milani Engineers | -- | -- | 0 | 35 |
| R | CF | -- | R4-R1 | -- | Route 4 Bypass R1 | 350,000 | 1 | -- | -- | -- | -- | -- | Rt 4 Bypass Auth | -- | -- | 0 | -- |
| R | CF | -- | R4-R2 | -- | Route 4 Bypass R2 | 150,000 | 9 | -- | -- | -- | -- | -- | Rt 4 Bypass Auth | -- | -- | 0 | -- |
| R | CF | | RV-R1 | RIO VISTA | Rio Vista R1 | 97,000 | 70 | -- | -- | -- | -- | -- | Rio Vista | 5,000 | 5,000 | 0 | 35 |
| R | L | | RV-R2 | RIO VISTA | Rio Vista R2 | 176,000 | 20 | -- | -- | -- | -- | -- | Rio Vista | 1,000 | 1,000 | 0 | 35 |
| R | L | | RV-R3 | RIO VISTA | Rio Vista R3 | 15,000 | 17 | -- | -- | -- | -- | -- | Rio Vista | 1,000 | 1,000 | 0 | 35 |
| R | CF | -- | SW-R1 | SIMMONS-WHEELER | Simmons-Wheeler R1 | 10,000 | 2 | -- | -- | -- | -- | -- | GEI | -- | -- | 16,000 | 30 |
| R | L | -- | SW-R2 | SIMMONS-WHEELER | Simmons-Wheeler R2 | 10,000 | 6 | -- | -- | -- | -- | -- | GEI | -- | -- | 15,000 | 30 |
| R | CF | -- | SW-R3 | SIMMONS-WHEELER | Simmons-Wheeler R3 | 50,000 | 10 | -- | -- | -- | -- | -- | GEI | -- | -- | 10,000 | 5 |
| R | L | -- | WI-R1 | WINTER ISLAND | Winter Island R1 | -- | 17 | -- | -- | -- | -- | -- | MBK Engineers | -- | -- | N/A | 35 |
| R | LC | -- | YL-R1 | YOLO CO CENTRAL LANDFILL | Yolo Co Central Landfill R1 | 9,000,000 | 310 | -- | -- | -- | -- | -- | Yolo Co Planning PW | 30,000 | 30,000 | 2,500 | 30 |

NOTES:

-- not provided, not available, not applicable, or not calculated due to unavailable information

Capacity or Volume estimated and provided by RD engineer or USACE

1 - Estimated Capacity or Volume

Estimated Capacity for Dredged Sediment and Water [5]

Estimated Volume of Dredged Sediment for Reuse

Estimated Volume of Dredged Sediment for Reuse

2 - DWR LIDAR data (2007)

3 - Estimated based on conversations with RD engineers. Distance increases from upstream to downstream and island elevation decreases.

4 - USGS, 2002

5 - Stockpile Site Volume estimated by multiplying the area by the difference between the average landsurface elevation and 5 feet below the lowest elevation of nearby levee

S = Site used only Stockpiling Dredged Sediment

PR = Site used for both Placement and Reuse of Dredged Sediment :

R = Site used only for the Reuse of Dredged Sediment :

L = Levees (island)

SC = Filling or shallowing of channels

HU = Habitat development upland

HW = Habitat development wetland

LC = Landfill cover

LR = Levees along railroad lines

CF = construction fill

SR = subsidence reversal

TABLE 8
DISTANCES BETWEEN STOCKPILE AND REUSE SITES and REACH 1 - SACRAMENTO DWSC

Straightline Distance from Reach:

| 0 to 10,000 feet | | | 10,001 to 20,000 feet | | | 20,001 to 30,000 feet | | | 30,001 to 40,000 feet | | | 40,001 to 50,000 feet | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type |
| S-20 | 430,000 | S | HB-P1 | 10,000 | S | BD | 0 | S | BR-P1 | 2,800,000 | S | BR-P3 | 10,700,000 | S |
| S-35 | 210,000 | S | HB-P4 | 1,000,000 | S | BD-P1 | 0 | S | BR-P4 | 11,700,000 | S | BR-P5 | 4,500,000 | S |
| S-35a | 0 | S | HB-P5 | 0 | S | BD-P2 | 0 | S | SW-P1 | 300,000 | S | BR-P6 | 1,500,000 | S |
| SL | 0 | S | MPPS | 6,300,000 | S | BD-P3 | 0 | S | TI-P1 | 100,000 | S | S-13 | 0 | S |
| SX-P1 | 0 | S | S-19 | 1,410,000 | S | BRRA | 0 | S | WT-P1 | 2,700,000 | S | | | |
| VS-P1 | 3,100,000 | S | SPPS | 4,300,000 | S | HB-P2 | 200,000 | S | | | | | | |
| | | | | | | HB-P3 | 1,000,000 | S | | | | | | |
| | | | | | | S-16 | 650,000 | S | | | | | | |
| | | | | | | TI-P2 | 0 | S | | | | | | |
| subtotal | 3,740,000 | | subtotal | 13,020,000 | | subtotal | 1,850,000 | | subtotal | 17,600,000 | | subtotal | 16,700,000 | |
| effective capacity | 374,000 | | effective capacity | 1,302,000 | | effective capacity | 139,000 | | effective capacity | 880,000 | | effective capacity | 835,000 | |
| est cost to pump | $24,310,000 | | est cost to pump | $110,670,000 | | est cost to pump | $20,350,000 | | est cost to pump | $246,400,000 | | est cost to pump | $292,250,000 | |

| Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MT-PR1 | 2,000,000 | PR | AD-R1 | 1,000,000 | R | BD-PR1 | 150,000 | PR | BD-PR2 | 250,000 | PR | JI-R3 | 475,000 | R |
| SI-PR1 | -- | PR | DW-R1 | -- | R | HB-PR1 | 10,000 | PR | BR-PR1 | 50,000 | PR | NB-PR2 | 480,000 | PR |
| VS-PR1 | -- | PR | HB-PR1 | 10,000 | PR | JI-PR1 | -- | PR | BR-PR2 | 600,000 | PR | R4-R1 | 350,000 | R |
| VS-PR2 | -- | PR | HB-R1 | 60,000 | R | JI-PR2 | -- | PR | DS-PR1 | 1,000,000 | PR | SH-PR1 | 1,000,000 | PR |
| WI-PR1 | -- | PR | MT-PR2 | 15,000,000 | PR | JI-PR4 | -- | PR | HT-PR1 | -- | PR | | | |
| WI-R1 | -- | R | | | | JI-R1 | 250,000 | R | HT-PR2 | 500,000 | PR | | | |
| | | | | | | JI-R2 | 475,000 | R | JI-PR3 | -- | PR | | | |
| | | | | | | JI-R4 | 500,000 | R | JI-R3 | 475,000 | R | | | |
| | | | | | | MT-PR3 | -- | PR | NB-PR1 | 282,000 | PR | | | |
| | | | | | | SI-PR1 | -- | PR | R4-R2 | 150,000 | R | | | |
| | | | | | | SI-PR2 | -- | PR | TI-PR1 | 1,700,000 | PR | | | |
| | | | | | | SW-R1 | 10,000 | R | TI-PR2 | 1,000,000 | PR | | | |
| | | | | | | SW-R2 | 10,000 | R | VS-PR2 | -- | PR | | | |
| | | | | | | SW-R3 | 50,000 | R | WT-PR1 | -- | PR | | | |
| | | | | | | TI-PR3 | 300,000 | PR | | | | | | |
| subtotal | 2,000,000 | | subtotal | 16,070,000 | | subtotal | 1,755,000 | | subtotal | 6,007,000 | | subtotal | 2,305,000 | |
| total sediment vol | 2,374,000 | | total sediment vol | 17,372,000 | | total sediment vol | 1,894,000 | | total sediment vol | 6,887,000 | | total sediment vol | 3,140,000 | |

NOTES : All volumes in cubic yards

S = Site used only for Stockpiling of Dredged Sediment and Water :

PR = Site used for both Placement and Reuse of Dredged Sediment :

R = Site used only for the Reuse of Dredged Sediment :

Total Capacity = volume of sediment and water that can be held at a Stockpile Site

Effective Capacity = Portion of Total Capacity that would consist of sediment due to pumping distance to Stockpile Site

Total Volume = Total demand for sediment (no water) to be consumed for beneficial reuse

-- information is unavailable

To avoid duplication within a single Reach, sites that span more than one distance from the Reach (i.e. long sites that have portions within 10,000 feet and other portions that are within 20,000 feet of the DWSC) are associated with the closest distance to the DWSC. Sites are, however, associated with more than one Reach, based on distance (i.e. a site may be both 10,000 feet from Reach 1 and 20,000 feet from Reach 2).

TABLE 9

DISTANCES BETWEEN STOCKPILE AND REUSE SITES and REACH 2 - SACRAMENTO DWSC

Straightline Distance from Reach:

| 0 to 10,000 feet | | | 10,001 to 20,000 feet | | | 20,001 to 30,000 feet | | | 30,001 to 40,000 feet | | | 40,001 to 50,000 feet | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type |
| BR-P1 | 2,800,000 | S | BD | 0 | S | BR-P5 | 4,500,000 | S | BI-P1 | 4,500,000 | S | CR-P1 | 3,700,000 | S |
| BR-P4 | 11,700,000 | S | BD-P1 | 0 | S | BR-P6 | 1,500,000 | S | HB-P4 | 1,000,000 | S | DH-P1 | 5,200,000 | S |
| BRRA | 0 | S | BD-P2 | 0 | S | S-12 | 160,000 | S | JI-P1 | 750,000 | S | HB-P1 | 10,000 | S |
| GI-P1 | 2,300,000 | S | BD-P3 | 0 | S | TI-P1 | 100,000 | S | S-11 | 190,000 | S | HB-P2 | 200,000 | S |
| RV-P1 | 4,000,000 | S | BR-P2 | 700,000 | S | TY-P2 | 19,800,000 | S | S-31a | 0 | S | HB-P3 | 1,000,000 | S |
| RV-P2 | 280,000 | S | BR-P3 | 10,700,000 | S | TY-P3 | 6,300,000 | S | TY-P1 | 9,000,000 | S | HB-P5 | 0 | S |
| S-13 | 0 | S | MPPS | 6,300,000 | S | TY-P4 | 9,600,000 | S | WT-P2 | 3,900,000 | S | VI-P1 | 100,000 | S |
| S-14 | 890,000 | S | SPPS | 4,300,000 | S | VS-P1 | 3,100,000 | S | | | | WG-P1 | 700,000 | S |
| S-16 | 650,000 | S | | | | WT-P1 | 2,700,000 | S | | | | | | |
| S-19 | 1,410,000 | S | | | | | | | | | | | | |
| S-20 | 430,000 | S | | | | | | | | | | | | |
| S-35 | 210,000 | S | | | | | | | | | | | | |
| S-35a | 0 | S | | | | | | | | | | | | |
| SL | 0 | S | | | | | | | | | | | | |
| SX-P1 | 0 | P | | | | | | | | | | | | |
| TI-P2 | 0 | S | | | | | | | | | | | | |
| subtotal | 24,670,000 | | subtotal | 22,000,000 | | subtotal | 47,760,000 | | subtotal | 19,340,000 | | subtotal | 10,910,000 | |
| effective capacity | 2,467,000 | | effective capacity | 2,200,000 | | effective capacity | 3,582,000 | | effective capacity | 967,000 | | effective capacity | 546,000 | |
| est cost to pump | $160,355,000 | | est cost to pump | $187,000,000 | | est cost to pump | $525,360,000 | | est cost to pump | $270,760,000 | | est cost to pump | $190,925,000 | |

| Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BR-PR1 | 50,000 | PR | BD-PR1 | 150,000 | PR | BD-PR2 | 250,000 | PR | BI-R1 | -- | R | HB-PR1 | 10,000 | PR |
| BR-PR2 | 600,000 | PR | BD-PR2 | 250,000 | PR | DW-R1 | -- | R | DS-PR1 | 1,000,000 | PR | MT-PR2 | 15,000,000 | PR |
| PP-PR1 | -- | PR | JI-PR2 | -- | PR | JI-PR1 | -- | PR | HB-R1 | 60,000 | R | PP-PR1 | -- | PR |
| RV-R1 | 97,000 | R | JI-R1 | 250,000 | R | JI-PR3 | -- | PR | HT-PR1 | -- | PR | R4-R1 | 350,000 | R |
| RV-R2 | 176,000 | R | PP-PR1 | -- | PR | JI-PR4 | -- | PR | HT-PR2 | 500,000 | PR | R4-R2 | 150,000 | R |
| RV-R3 | 15,000 | R | WT-PR1 | -- | R | JI-R2 | 475,000 | R | JI-PR3 | -- | PR | SH-PR1 | 1,000,000 | PR |
| SI-PR1 | -- | PR | | | | JI-R4 | 500,000 | R | JI-PR4 | -- | PR | ST-PR1 | 650,000 | PR |
| SI-PR2 | -- | PR | | | | MT-PR1 | 2,000,000 | PR | JI-R3 | 475,000 | R | WG-PR1 | 65,000 | PR |
| TI-PR2 | 1,000,000 | PR | | | | MT-PR2 | 15,000,000 | PR | MT-PR3 | -- | PR | WG-PR2 | 35,000 | PR |
| TI-PR3 | 300,000 | PR | | | | TI-PR1 | 1,700,000 | PR | NB-PR1 | 282,000 | PR | | | |
| | | | | | | VS-PR1 | -- | PR | NB-PR2 | 480,000 | PR | | | |
| | | | | | | VS-PR2 | -- | PR | PP-PR1 | -- | PR | | | |
| | | | | | | WI-PR1 | -- | PR | ST-PR1 | 650,000 | PR | | | |
| | | | | | | WI-R1 | -- | R | VI-PR1 | 750,000 | PR | | | |
| | | | | | | | | | WT-PR1 | -- | PR | | | |
| subtotal | 2,238,000 | | subtotal | 650,000 | | subtotal | 19,925,000 | | subtotal | 4,197,000 | | subtotal | 17,260,000 | |
| total sediment vol | 4,705,000 | | total sediment vol | 2,850,000 | | total sediment vol | 23,507,000 | | total sediment vol | 5,164,000 | | total sediment vol | 17,806,000 | |

NOTES : All volumes in cubic yards

S = Site used only for Stockpiling of Dredged Sediment and Water :

PR = Site used for both Placement and Reuse of Dredged Sediment :

R = Site used only for the Reuse of Dredged Sediment :

Total Capacity = volume of sediment and water that can be held at a Stockpile Site

Effective Capacity = Portion of Total Capacity that would consist of sediment due to pumping distance to Stockpile Site

Total Volume = Total demand for sediment (no water) to be consumed for beneficial reuse

-- information is unavailable

To avoid duplication within a single Reach, sites that span more than one distance from the Reach (i.e. long sites that have portions within 10,000 feet and other portions that are within 20,000 feet of the DWSC) are associated with the closest distance to the DWSC. Sites are, however, associated with more than one Reach, based on distance (i.e. a site may be both 10,000 feet from Reach 1 and 20,000 feet from Reach 2).

TABLE 10
DISTANCES BETWEEN STOCKPILE AND REUSE SITES and REACH 3 - SACRAMENTO DWSC

Straightline Distance from Reach:

| 0 to 10,000 feet | | | 10,001 to 20,000 feet | | | 20,001 to 30,000 feet | | | 30,001 to 40,000 feet | | | 40,001 to 50,000 feet | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type |
| GI-P1 | 2,300,000 | S | BR-P1 | 2,800,000 | S | BR-P5 | 4,500,000 | S | BD | 0 | S | BD-P3 | 0 | S |
| RV-P1 | 4,000,000 | S | BR-P2 | 700,000 | S | BR-P6 | 1,500,000 | S | BD-P1 | 0 | S | BI-P1 | 4,500,000 | S |
| RV-P2 | 280,000 | S | BR-P3 | 10,700,000 | S | BRRA | 0 | S | BD-P2 | 0 | S | CR-P1 | 3,700,000 | S |
| S-12 | 160,000 | S | BR-P4 | 11,700,000 | S | TY-P2 | 19,800,000 | S | S-19 | 1,410,000 | S | DH-P1 | 5,200,000 | S |
| S-13 | 0 | S | S-11 | 190,000 | S | TY-P3 | 6,300,000 | S | S-32-5 | 5,000 | S | MPPS | 6,300,000 | S |
| S-14 | 890,000 | S | S-16 | 650,000 | S | TY-P4 | 9,600,000 | S | S-32-6 | 5,000 | S | NH-P3 | 3,400,000 | S |
| | | | S-31a | 0 | S | | | | TY-P1 | 9,000,000 | S | NH-P5 | 0 | S |
| | | | | | | | | | WT-P1 | 2,700,000 | S | S-20 | 430,000 | S |
| | | | | | | | | | WT-P2 | 3,900,000 | S | S-31 | 0 | S |
| | | | | | | | | | | | | SX-P1 | 0 | S |
| | | | | | | | | | | | | VI-P1 | 100,000 | S |
| | | | | | | | | | | | | WG-P1 | 700,000 | S |
| | | | | | | | | | | | | | | |
| subtotal | 7,630,000 | | subtotal | 26,740,000 | | subtotal | 41,700,000 | | subtotal | 17,020,000 | | subtotal | 24,330,000 | |
| effective capacity | 763,000 | | effective capacity | 2,674,000 | | effective capacity | 3,128,000 | | effective capacity | 851,000 | | effective capacity | 1,217,000 | |
| est cost to pump | $49,595,000 | | est cost to pump | $227,290,000 | | est cost to pump | $458,700,000 | | est cost to pump | $238,280,000 | | est cost to pump | $425,775,000 | |

| Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PP-PR1 | -- | PR | BR-PR1 | 50,000 | PR | PP-PR1 | -- | PR | BD-PR1 | 150,000 | PR | JI-PR2 | -- | PR |
| RV-R1 | 97,000 | R | BR-PR2 | 600,000 | PR | SI-PR2 | -- | PR | BD-PR2 | 250,000 | PR | JI-PR3 | -- | PR |
| RV-R2 | 176,000 | R | | | | TI-PR1 | 1,700,000 | PR | BI-R1 | -- | R | MW-PR1 | -- | PR |
| RV-R3 | 15,000 | R | | | | TI-PR2 | 1,000,000 | PR | SI-PR1 | -- | PR | NH-PR1 | 282,000 | PR |
| | | | | | | | | | ST-PR1 | 650,000 | PR | SI-PR1 | -- | PR |
| | | | | | | | | | TI-PR1 | 1,700,000 | PR | VI-PR1 | 750,000 | PR |
| | | | | | | | | | TI-PR3 | 300,000 | PR | WG-PR1 | 65,000 | PR |
| | | | | | | | | | WT-PR1 | -- | PR | WG-PR2 | 35,000 | PR |
| | | | | | | | | | YB-PR1 | -- | PR | JI-R1 | 250,000 | R |
| | | | | | | | | | | | | | | |
| subtotal | 288,000 | | subtotal | 650,000 | | subtotal | 2,700,000 | | subtotal | 3,050,000 | | subtotal | 1,382,000 | |
| total sediment vol | 1,051,000 | | total sediment vol | 3,324,000 | | total sediment vol | 5,828,000 | | total sediment vol | 3,901,000 | | total sediment vol | 2,599,000 | |

NOTES : All volumes in cubic yards

S = Site used only for Stockpiling of Dredged Sediment and Water :

PR = Site used for both Placement and Reuse of Dredged Sediment :

R = Site used only for the Reuse of Dredged Sediment :

Total Capacity = volume of sediment and water that can be held at a Stockpile Site

Effective Capacity = Portion of Total Capacity that would consist of sediment due to pumping distance to Stockpile Site

Total Volume = Total demand for sediment (no water) to be consumed for beneficial reuse

-- information is unavailable

To avoid duplication within a single Reach, sites that span more than one distance from the Reach (i.e. long sites that have portions within 10,000 feet and other portions that are within 20,000 feet of the DWSC) are associated with the closest distance to the DWSC. Sites are, however, associated with more than one Reach, based on distance (i.e. a site may be both 10,000 feet from Reach 1 and 20,000 feet from Reach 2).

TABLE 11
DISTANCES BETWEEN STOCKPILE AND REUSE SITES and REACH 4 - SACRAMENTO DWSC

Straightline Distance from Reach:

| 0 to 10,000 feet | | | 10,001 to 20,000 feet | | | 20,001 to 30,000 feet | | | 30,001 to 40,000 feet | | | 40,001 to 50,000 feet | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type | Site ID | Total Cap | Type |
| S-11 | 190,000 | S | RV-P1 | 4,000,000 | S | GI-P1 | 2,300,000 | S | BR-P1 | 2,800,000 | S | BR-P3 | 10,700,000 | S |
| S-12 | 160,000 | S | S-32-2 | 5000 | S | RV-P2 | 280,000 | S | BR-P2 | 700,000 | S | BR-P5 | 4,500,000 | S |
| S-31 | 0 | S | S-4 | 3,500,000 | S | S-13 | 0 | S | BR-P4 | 11,700,000 | S | BR-P6 | 1,500,000 | S |
| S-31a | 0 | S | | | | S-14 | 890,000 | S | S-16 | 650,000 | S | BRRA | 0 | S |
| S-32-3 | 5,000 | S | | | | S-32-1 | 5,000 | S | TY-P2 | 19,800,000 | S | DH-P1 | 5,200,000 | S |
| S-32-4 | 5,000 | S | | | | | | | TY-P4 | 9,600,000 | S | TY-P1 | 9,000,000 | S |
| S-32-5 | 5,000 | S | | | | | | | WS-P1 | 0 | S | TY-P3 | 6,300,000 | S |
| S-32-6 | 5,000 | S | | | | | | | WS-P2 | 0 | S | WG-P1 | 700,000 | S |
| S-7 | 1,400,000 | S | | | | | | | | | | | | |
| S-9 | 1,500,000 | S | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| subtotal | 3,080,000 | | subtotal | 7,505,000 | | subtotal | 3,475,000 | | subtotal | 45,250,000 | | subtotal | 37,900,000 | |
| effective capacity | 308,000 | | effective capacity | 751,000 | | effective capacity | 261,000 | | effective capacity | 2,263,000 | | effective capacity | 1,895,000 | |
| est cost to pump | $20,020,000 | | est cost to pump | $63,792,500 | | est cost to pump | $38,225,000 | | est cost to pump | $633,500,000 | | est cost to pump | $663,250,000 | |

| Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PP-PR1 | -- | PR | none | | | RV-R1 | 97,000 | R | BR-PR1 | 50,000 | PR | BI-R1 | -- | R |
| YB-PR1 | -- | PR | | | | RV-R2 | 176,000 | R | | | | BR-PR1 | 50,000 | PR |
| | | | | | | RV-R3 | 15,000 | R | | | | BR-PR2 | 600,000 | PR |
| | | | | | | | | | | | | GL-PR1 | 450,000 | PR |
| | | | | | | | | | | | | GL-PR2 | -- | PR |
| | | | | | | | | | | | | MW-PR1 | -- | PR |
| | | | | | | | | | | | | SI-PR2 | -- | PR |
| | | | | | | | | | | | | ST-PR1 | 650,000 | PR |
| | | | | | | | | | | | | TI-PR2 | 1,000,000 | PR |
| | | | | | | | | | | | | WG-PR1 | 65,000 | PR |
| | | | | | | | | | | | | WG-PR2 | 35,000 | PR |
| | | | | | | | | | | | | | | |
| subtotal | 0 | | subtotal | 0 | | subtotal | 288,000 | | subtotal | 50,000 | | subtotal | 2,850,000 | |
| total sediment vol | 308,000 | | total sediment vol | 751,000 | | total sediment vol | 549,000 | | total sediment vol | 2,313,000 | | total sediment vol | 4,745,000 | |

NOTES : All volumes in cubic yards

S = Site used only for Stockpiling of Dredged Sediment and Water :

PR = Site used for both Placement and Reuse of Dredged Sediment :

R = Site used only for the Reuse of Dredged Sediment :

Total Capacity = volume of sediment and water that can be held at a Stockpile Site

Effective Capacity = Portion of Total Capacity that would consist of sediment due to pumping distance to Stockpile Site

Total Volume = Total demand for sediment (no water) to be consumed for beneficial reuse

-- information is unavailable

To avoid duplication within a single Reach, sites that span more than one distance from the Reach (i.e. long sites that have portions within 10,000 feet and other portions that are within 20,000 feet of the DWSC) are associated with the closest distance to the DWSC. Sites are, however, associated with more than one Reach, based on distance (i.e. a site may be both 10,000 feet from Reach 1 and 20,000 feet from Reach 2).

TABLE 12
DISTANCES BETWEEN STOCKPILE AND REUSE SITES and REACH 5 - SACRAMENTO DWSC

Straightline Distance from Reach:

| 0 to 10,000 feet | | | 10,001 to 20,000 feet | | | 20,001 to 30,000 feet | | | 30,001 to 40,000 feet | | | 40,001 to 50,000 feet | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site ID | Total Capacity | Type | Site ID | Total Capacity | Type | Site ID | Total Capacity | Type | Site ID | Total Capacity | Type | Site ID | Total Capacity | Type |
| S-31 | 0 | S | none | | | S-9 | 1,500,000 | S | none | | | S-31a | 0 | S |
| S-32-1 | 5,000 | S | | | | | | | | | | S-32-5 | 5,000 | S |
| S-32-2 | 5,000 | S | | | | | | | | | | | | |
| S-32-3 | 5,000 | S | | | | | | | | | | | | |
| S-32-4 | 5,000 | S | | | | | | | | | | | | |
| S-4 | 3,500,000 | S | | | | | | | | | | | | |
| S-7 | 1,400,000 | S | | | | | | | | | | | | |
| WS-P1 | 0 | S | | | | | | | | | | | | |
| WS-P2 | 0 | S | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| subtotal | 4,920,000 | | subtotal | 0 | | subtotal | 1,500,000 | | subtotal | 0 | | subtotal | 5,000 | |
| effective capacity | 492,000 | | effective capacity | 0 | | effective capacity | 113,000 | | effective capacity | 0 | | effective capacity | 250 | |
| est cost to pump | $31,980,000 | | est cost to pump | $0 | | est cost to pump | $16,500,000 | | est cost to pump | $0 | | est cost to pump | $87,500 | |

| Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type | Site ID | Sed Volume | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YB-PR1 | -- | PR | none | | | YL-R1 | 9,000,000 | R | none | | | none | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| subtotal | 0 | | subtotal | 0 | | subtotal | 9,000,000 | | subtotal | 0 | | subtotal | 0 | |
| total sediment vol | 492,000 | | total sediment vol | 0 | | total sediment vol | 9,113,000 | | total sediment vol | 0 | | total sediment vol | 250 | |

NOTES :

S = Site used only for Stockpiling of Dredged Sediment and Water :

PR = Site used for both Placement and Reuse of Dredged Sediment :

R = Site used only for the Reuse of Dredged Sediment :

Total Capacity = volume of sediment and water that can be held at a Stockpile Site (cubic yards)

Effective Capacity = Portion of Total Capacity that would consist of sediment due to pumping distance to Stockpile Site (cubic yards)

Sediment Volume = Total demand for sediment (no water) to be consumed for beneficial reuse (cubic yards)

-- information is unavailable

To avoid duplication within a single Reach, sites that span more than one distance from the Reach (i.e. long sites that have portions within 10,000 feet and other portions that are within 20,000 feet of the DWSC) are associated with the closest distance to the DWSC. Sites are, however, associated with more than one Reach, based on distance (i.e. a site may be both 10,000 feet from Reach 1 and 20,000 feet from Reach 2).

TABLE 16
2008 Laboratory Results of Total Concentration in Sediments Collected from the Sacramento Deep Water Ship Channel

| Location ID | River Mile | Inorganics | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Aluminum | Antimony | Arsenic | Barium | Beryllium | Cadmium | Calcium | Chromium | Cobalt | Copper | Iron | Lead |
| | | mg/kg | | | | | | | | | | | |
| Residential PRG | | 77,000 | 31 | 0.39 | 15,000 | 160 | 70 | -- | 280 | 23 | 3,100 | 55,000 | 400 |
| Industrial PRG | | 990,000 | 410 | 1.6 | 190,000 | 2,000 | 810 | -- | 1,400 | 300 | 41,000 | 720,000 | 800 |
| 08SAC1-12 | 1 | 28,400 | ND | 6.8 | 127 | ND | ND | 5,110 | 89.6 (82.4) | 17.7 | 50 | 33,900 | 7.72 |
| 08SAC2-12 | 2 | 12,900 | ND | 4.94 | 66.5 | ND | ND | 4,160 | 61.6 (60.3) | 14.6 | 16.4 | 21,100 | 6.71 |
| 08SAC3-1 | 3 | 25,700 | ND | 13 (11.9) | 111 | ND | ND | 4,590 | 80.1 (74.4) | 18.6 | 50 | 33,900 | 8.42 |
| 08SAC4-12 | 4 | 21,700 | ND | 7.06 | 126 | ND | ND | 5,060 | 74.3 (68.6) | 18.3 | 42.1 | 30,500 | 11 |
| 08SAC5-123 | 5 | 21,600 | ND | 4.79 | 111 | ND | ND | 4,830 | 69.8 (68.3) | 15.9 | 38.6 | 29,600 | 8.38 |
| 08SAC5-4567 | 5 | 21,000 | ND | 6.28 | 115 | ND | ND | 4,490 | 76 (65.8) | 16.6 | 42.6 | 28,100 | 10.3 |
| 08SAC6-1234 | 6 | 17,000 | ND | 5.25 | 94.6 | ND | ND | 4,060 | 61.2 | 15.3 | 28.2 | 24,800 | 7.23 |
| 08SAC6-5678 | 6 | 18,000 | ND | 6.14 | 111 | ND | ND | 3,950 | 60.8 | 15.3 | 31.3 | 24,700 | 7.88 |
| 08SAC7-123 | 7 | 22,800 | ND | 5.43 | 132 | ND | ND | 5,110 | 77.3 (71.7) | 18.2 | 41.2 | 30,700 | 8.72 |
| 08SAC7-456 | 7 | 21,800 | ND | 7.64 | 136 | ND | ND | 5,270 | 75.5 (67.7) | 19.1 | 44.5 | 29,100 | 11.4 |
| 08SAC8-123 | 8 | 21,700 | ND | 6.86 | 127 | ND | ND | 5,040 | 73.0 (69.5) | 16.7 | 42.7 | 29,700 | 10.8 |
| 08SAC8-4567 | 8 | 17,700 | ND | 6.07 | 111 | ND | ND | 4,330 | 67.1 (61.7) | 15.6 | 32.3 | 25,400 | 8.23 |
| 08SAC9-123 | 9 | 14,400 | ND | 5.01 | 86.3 | ND | ND | 4,040 | 60.6 | 14.6 | 26.7 | 21,500 | 6.63 |
| 08SAC9-4567 | 9 | 14,400 | ND | 5.74 | 85.9 | ND | ND | 3,910 | 62.1 | 14.3 | 24.2 | 21,100 | 18.3 |
| 08SAC10-123 | 10 | 9,320 | ND | 4.04 | ND | ND | ND | 2,860 | 46.3 | 11.8 | ND | 16,600 | 4.61 |
| 08SAC10-4567 | 10 | 8,730 | ND | 3.6 | ND | ND | ND | 2,690 | 40.8 | 12.4 | ND | 16,600 | 4.16 |
| 08SAC11-123 | 11 | 12,600 | ND | 4 | ND | ND | ND | 3,350 | 59.5 | 13.4 | ND | 19,500 | 4.34 |
| 08SAC11-456 | 11 | 9,340 | ND | 3.95 | ND | ND | ND | 2,900 | 45.8 | 12.5 | ND | 16,800 | 3.91 |
| 08SAC12-123 | 12 | 7,730 | ND | 4.14 | ND | ND | ND | 2,570 | 36.4 | 11.7 | ND | 14,500 | 3.95 |
| 08SAC13-123 | 13 | 7,440 | ND | 4.52 | ND | ND | ND | 2,690 | 44.9 | 11 | ND | 14,900 | 24.3 |
| 08SAC13-123 | 13 | 14,300 | ND | 3.85 | ND | ND | ND | 4,010 | 52.9 | 14.7 | ND | 22,900 | 5.03 |
| 08SAC14-123 | 14 | 20,700 | ND | 4.91 | ND | 0.461 | ND | 4,880 | 76.4 (71.9) | 18.3 | ND | 31,500 | 7.08 |
| 08SAC16/18-123 | 16,17,18 | 19,300 | ND | 5.52 | ND | 0.435 | ND | 4,420 | 66.9 (64.2) | 18.5 | ND | 30,300 | 6.65 |
| 08SAC16/18-123 | 16,17,18 | 19,300 | ND | 5.52 | ND | 0.435 | ND | 4,420 | 64.2 | 18.5 | ND | 30,300 | 6.65 |
| 08SAC16/18-123 | 16,17,18 | 19,300 | ND | 5.52 | ND | 0.435 | ND | 4,420 | 91 (84.5) | 18.5 | ND | 30,300 | 6.65 |
| 08SAC19-12 | 19 | 19,700 | ND | 6.27 | ND | 0.438 | ND | 6,410 | 91 (84.5) | 20.3 | ND | 32,100 | 6.57 |
| 08SAC20-12 | 20 | 19,200 | ND | 7.16 | ND | 0.445 | ND | 6,940 | 96.6 (95.2) | 18.6 | ND | 30,700 | 6.17 |
| 08SAC21-12 | 21 | 25,200 | ND | 6.58 | ND | 0.556 | ND | 10,200 | 96.6 (93.7) | 20.7 | ND | 36,000 | 7.09 |
| 08SAC22-1 | 22 | 27,800 | ND | 8.69 | ND | 0.678 | ND | 7,710 | 116 (109.6) | 23.8 | ND | 40,600 | 21.9 |
| 08SAC23-1 | 23 | 29,300 | ND | 10.5 | ND | 0.673 | ND | 13,000 | 98.9 (91.7) | 24.2 | ND | 42,600 | 9.11 |
| 08SAC24-1 | 24 | 23,200 | ND | 7.37 | ND | 0.585 | ND | 8,120 | 106 (104.5) | 20.5 | ND | 35,400 | 8 |
| 08SAC25-12 | 25 | 21,300 | ND | 7.57 | ND | 0.499 | ND | 6,230 | 112 (109.1) | 20.4 | ND | 34,900 | 6.81 |
| 08SAC26-123 | 26 | 18,900 | ND | 5.34 | ND | 0.427 | ND | 6,850 | 94.7 (94.9) | 18.6 | ND | 30,200 | 6.35 |
| 08SAC26-4567 | 26 | 20,100 | ND | 6.18 | ND | 0.458 | ND | 6,660 | 111 (105.9) | 20.6 | ND | 32,500 | 7.49 |
| 08SAC27-1234 | 27 | 18,500 | ND | 6.5 | ND | 0.499 | ND | 6,260 | 122 (110.4) | 21.2 | ND | 30,300 | 6.51 |
| 08SAC28-123 | 28 | 22,300 | ND | 6.74 | ND | 0.559 | ND | 6,180 | 100 (92.6) | 21.8 | ND | 32,600 | 7.97 |
| 08SAC29-1234 | 29 | 23,000 | ND | 6.31 | ND | 0.614 | ND | 5,440 | 122 (110.5) | 22.7 | ND | 34,400 | 8.02 |
| 08SAC30-1234 | 30 | 24,000 | ND | 7.22 | ND | 0.666 | ND | 5,850 | 158 (138.4) | 23.3 | ND | 37,200 | 9.44 |
| 08SAC31-12 | 31 | 26,400 | ND | 7.14 | ND | 0.705 | ND | 6,340 | 132 (119.3) | 25.3 | ND | 38,800 | 9.4 |
| 08SAC31-345 | 31 | 26,200 | ND | 7.55 | ND | 0.657 | ND | 5,450 | 117 (104.6) | 23.5 | ND | 38,100 | 8.84 |
| 08SAC32-12 | 32 | 23,600 | ND | 5.97 | ND | 0.582 | ND | 5,680 | 102 (89.7) | 19.4 | ND | 32,800 | 8.47 |
| 08SAC32-345 | 32 | 23,700 | ND | 5.57 | ND | 0.59 | ND | 7,040 | 107 | 19 | ND | 33,000 | 8.21 |
| 08SAC33-1234 | 33 | 24,200 | ND | 7.05 | ND | 0.621 | ND | 6,400 | 176 (163.3) | 22.3 | ND | 38,400 | 8.33 |
| 08SAC34-12 | 34 | 22,900 | ND | 5.96 | ND | 0.572 | ND | 6,070 | 86.1 (76.5) | 17.4 | ND | 32,200 | 8.22 |
| 08SAC34-345 | 34 | 26,700 | ND | 7.35 | ND | 0.619 | ND | 6,900 | 97.6 (87.8) | 20 | ND | 35,700 | 8.95 |
| 08SAC35-12 | 35 | 32,000 | ND | 7.3 | ND | 0.868 | ND | 5,700 | 119 | 23.8 | ND | 40,600 | 10.8 |
| 08SAC35-345 | 35 | 33,600 | ND | 6.29 | ND | 0.808 | ND | 6,160 | 117 | 23.1 | ND | 41,900 | 10.6 |

Notes:

-- : not analyzed or not applicable

< : compound was analyzed but not detected above the concentration listed

mg/kg : milligrams per kilogram

ND : compound was analyzed but not detected

PRG : Preliminary Remediation Goal

shaded yellow where value exceeds residential PRG

Values in parenthesis are rerun data results

TABLE 16
2008 Laboratory Results of Total Concentration in Sediments Collected from the Sacramento Deep Water Ship Channel

| Location ID | River Mile | Inorganics | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Magnesium | Manganese | Mercury | Methyl Mercury | Molybdenum | Potassium | Nickel | Selenium | Sodium | Silver | Thallium | Vanadium | Zinc |
| | | mg/kg | | | | | | | | | | | | |
| Residential PRG | | -- | 1,800 | 6.7 | 7 | 390 | -- | 1,600 | 390 | -- | 390 | 5.1 | 550 | 23,000 |
| Industrial PRG | | -- | 23,000 | 28 | 100 | 5,100 | -- | 20,000 | 5,100 | -- | 5,100 | 66 | 7,200 | 310,000 |
| 08SAC1-12 | 1 | 12,400 | 561 | <0.098 | <0.001 | ND | 2,150 | 96.2 (90.9) | ND | 2560 | ND | ND | 96.1 | 91 |
| 08SAC2-12 | 2 | 9,110 | 379 | <0.098 | <0.001 | ND | 1,210 | 73.7 | ND | 861 | ND | ND | 46.5 | 51.4 |
| 08SAC3-1 | 3 | 10,000 | 323 | <0.099 | <0.001 | 1.27 | 2,000 | 96.5 (90.6) | ND | 2140 | ND | ND | 89.3 | 84 |
| 08SAC4-12 | 4 | 10,600 | 772 | 0.13 | <0.001 | ND | 1,830 | 90.2 (85.5) | ND | 850 | ND | ND | 69.2 | 105 |
| 08SAC5-123 | 5 | 11,700 | 631 | 0.115 | <0.001 | ND | 1,720 | 80.9 (80.4) | ND | 717 | ND | ND | 66.8 | 89.2 |
| 08SAC5-4567 | 5 | 10,000 | 591 | 0.156 | <0.001 | ND | 1,600 | 86.6 (78.7) | ND | 752 | ND | ND | 66.1 | 104 |
| 08SAC6-1234 | 6 | 9,600 | 493 | <0.098 | <0.001 | ND | 1,450 | 74.5 (76.2) | ND | 635 | ND | ND | 52.2 | 76.1 |
| 08SAC6-5678 | 6 | 8,680 | 548 | 0.132 | <0.001 | ND | 1,310 | 72.5 (68.6) | ND | 525 | ND | ND | 56.9 | 81.3 |
| 08SAC7-123 | 7 | 11,200 | 757 | <0.099 | <0.001 | ND | 1,560 | 94.5 (90.5) | ND | 620 | ND | ND | 74.4 | 100 |
| 08SAC7-456 | 7 | 10,900 | 652 | 0.136 | <0.001 | ND | 1,710 | 92.7 | ND | 913 | ND | ND | 68.3 | 105 |
| 08SAC8-123 | 8 | 10,900 | 641 | <0.1 | <0.001 | ND | 1,600 | 88.9 (86.2) | ND | 799 | ND | ND | 68 | 99.1 |
| 08SAC8-4567 | 8 | 9,630 | 540 | <0.1 | <0.001 | ND | 1,360 | 82.2 (78.6) | ND | 505 | ND | ND | 59 | 83.4 |
| 08SAC9-123 | 9 | 8,150 | 477 | <0.099 | <0.001 | ND | 1,110 | 73.3 (69.4) | ND | 422 | ND | ND | 49.7 | 72.6 |
| 08SAC9-4567 | 9 | 8,800 | 417 | <0.1 | <0.001 | ND | 1,170 | 77.5 (72.5) | ND | 364 | ND | ND | 50.2 | 73.3 |
| 08SAC10-123 | 10 | 6,880 | 262 | <0.1 | <0.001 | ND | 907 | ND | ND | 257 | ND | ND | 34.7 | ND |
| 08SAC10-4567 | 10 | 7,360 | 283 | <0.1 | <0.001 | ND | 1,180 | ND | ND | 253 | ND | ND | 35.2 | ND |
| 08SAC11-123 | 11 | 8,770 | 292 | <0.1 | <0.001 | ND | 1,120 | ND | ND | 308 | ND | ND | 46.5 | ND |
| 08SAC11-456 | 11 | 7,600 | 278 | <0.1 | <0.001 | ND | 1,060 | ND | ND | 301 | ND | ND | 35.5 | ND |
| 08SAC12-123 | 12 | 6,290 | 279 | <0.1 | <0.001 | ND | 918 | ND | ND | 232 | ND | ND | 29.9 | ND |
| 08SAC13-123 | 13 | 6,620 | 279 | <0.1 | <0.001 | ND | 782 | ND | ND | 186 | ND | ND | 29.5 | ND |
| 08SAC13-123 | 13 | 9,180 | 355 | <0.1 | <0.001 | ND | 1,220 | ND | ND | 391 | ND | ND | 48.7 | ND |
| 08SAC14-123 | 14 | 12,300 | 526 | <0.1 | <0.001 | ND | 1,370 | ND | ND | 395 | ND | ND | 71.1 | ND |
| 08SAC16/18-123 | 16,17,18 | 11,000 | 682 | <0.1 | <0.001 | ND | 1,490 | ND | ND | 356 | ND | ND | 66.6 | ND |
| 08SAC16/18-123 | 16,17,18 | 11,000 | 682 | <0.1 | <0.001 | ND | 1,490 | ND | ND | 356 | ND | ND | 66.6 | ND |
| 08SAC16/18-123 | 16,17,18 | 11,000 | 682 | <0.1 | <0.001 | ND | 1,490 | ND | ND | 356 | ND | ND | 66.6 | ND |
| 08SAC19-12 | 19 | 15,900 | 541 | <0.1 | <0.001 | ND | 1,450 | ND | ND | 364 | ND | ND | 66.1 | ND |
| 08SAC20-12 | 20 | 17,700 | 554 | <0.1 | <0.001 | ND | 1,480 | ND | ND | 397 | ND | ND | 63.8 | ND |
| 08SAC21-12 | 21 | 19,600 | 604 | <0.1 | <0.001 | ND | 2,050 | ND | ND | 456 | ND | ND | 76.8 | ND |
| 08SAC22-1 | 22 | 18,700 | 812 | <0.1 | <0.001 | ND | 2,520 | ND | ND | 315 | ND | ND | 87.6 | ND |
| 08SAC23-1 | 23 | 23,800 | 1140 | <0.1 | <0.001 | ND | 2,180 | ND | ND | 636 | ND | ND | 94.8 | ND |
| 08SAC24-1 | 24 | 20,100 | 680 | 0.0964 | <0.001 | ND | 1,500 | ND | ND | 422 | ND | ND | 73.6 | ND |
| 08SAC25-12 | 25 | 20,600 | 700 | 0.101 | <0.001 | ND | 1,410 | ND | ND | 418 | ND | ND | 74 | ND |
| 08SAC26-123 | 26 | 17,000 | 579 | 0.0978 | <0.001 | ND | 1,460 | ND | ND | 427 | ND | ND | 64.9 | ND |
| 08SAC26-4567 | 26 | 19,200 | 621 | 0.116 | <0.001 | ND | 1,510 | ND | ND | 664 | ND | ND | 69.9 | ND |
| 08SAC27-1234 | 27 | 19,100 | 595 | 0.108 | <0.001 | ND | 1,360 | ND | ND | 337 | ND | ND | 67.6 | ND |
| 08SAC28-123 | 28 | 15,900 | 681 | <0.1 | <0.001 | ND | 1,590 | ND | ND | 446 | ND | ND | 73.8 | ND |
| 08SAC29-1234 | 29 | 18,800 | 693 | 0.157 | <0.001 | ND | 1,690 | ND | ND | 413 | ND | ND | 76 | ND |
| 08SAC30-1234 | 30 | 21,300 | 771 | 0.134 | <0.001 | ND | 1,850 | ND | ND | 425 | ND | ND | 81.8 | ND |
| 08SAC31-12 | 31 | 20,200 | 830 | 0.134 | <0.001 | ND | 2,020 | ND | ND | 493 | ND | ND | 85.6 | ND |
| 08SAC31-345 | 31 | 18,300 | 839 | 0.112 | <0.001 | ND | 1,750 | ND | ND | 704 | ND | ND | 87.4 | ND |
| 08SAC32-12 | 32 | 14,800 | 728 | <0.1 | <0.001 | ND | 1,590 | ND | ND | 544 | ND | ND | 75.6 | ND |
| 08SAC32-345 | 32 | 15,500 | 624 | 0.106 | <0.001 | ND | 1,770 | ND | ND | 480 | ND | ND | 74.2 | ND |
| 08SAC33-1234 | 33 | 22,700 | 695 | 0.186 | <0.001 | ND | 1,740 | ND | ND | 576 | ND | ND | 82.3 | ND |
| 08SAC34-12 | 34 | 14,200 | 525 | <0.1 | <0.001 | ND | 1,570 | ND | ND | 573 | ND | ND | 74.1 | ND |
| 08SAC34-345 | 34 | 16,000 | 647 | <0.1 | <0.001 | ND | 1,830 | ND | ND | 610 | ND | ND | 82.2 | ND |
| 08SAC35-12 | 35 | 17,000 | 836 | 0.125 | <0.001 | ND | 2,260 | ND | ND | 560 | ND | ND | 93.7 | ND |
| 08SAC35-345 | 35 | 17,400 | 823 | 0.116 | <0.001 | ND | 2,330 | ND | ND | 637 | ND | ND | 92.8 | ND |

Notes:

-- : not analyzed or not applicable

< : compound was analyzed but not detected above the concentration listed

mg/kg : milligrams per kilogram

ND : compound was analyzed but not detected

PRG : Preliminary Remediation Goal

shaded yellow where value exceeds residential PRG

Values in parenthesis are rerun data results

TABLE 16
2008 Laboratory Results of Total Concentration in Sediments Collected from the Sacramento Deep Water Ship Channel

| Location ID | River Mile | Orgaincs | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | PAHs | | | | | | | |
| | | OCPs | PCBs | Fluoranthene | Pyrene | Benzo(a)anthracene | Chrysene | Benzo(b)fluoranthene | Benzo(k)fluoranthene | Benzo(a)pyrene | Indeno(1,2,3-cd)pyrene |
| | | mg/kg | | | | | | | | | |
| Residential PRG | | -- | -- | 2300 | 1700 | 0.15 | 1.5 | 0.15 | 1.5 | 0.015 | 0.15 |
| Industrial PRG | | -- | -- | 22000 | 17000 | 2.1 | 210 | 2.1 | 21 | 0.21 | 2.1 |
| 08SAC1-12 | 1 | ND | ND | 0.0416 | ND | ND | ND | ND | ND | ND | ND |
| 08SAC2-12 | 2 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 08SAC3-1 | 3 | ND | ND | 0.0807 | 0.0446 | ND | ND | ND | ND | ND | ND |
| 08SAC4-12 | 4 | ND | ND | 0.0623 | 0.0581 | ND | ND | ND | ND | ND | ND |
| 08SAC5-123 | 5 | ND | ND | 0.0402 | 0.0441 | ND | ND | ND | ND | 0.0235 | 0.0206 |
| 08SAC5-4567 | 5 | ND | ND | 0.051 | 0.0468 | ND | ND | ND | ND | ND | ND |
| 08SAC6-1234 | 6 | ND | ND | 0.0642 | 0.0661 | 0.0193 | 0.0193 | ND | ND | 0.0184 | ND |
| 08SAC6-5678 | 6 | ND | ND | 0.0448 | 0.0505 | ND | ND | ND | ND | ND | ND |
| 08SAC7-123 | 7 | ND | ND | 0.068 | 0.0602 | ND | ND | ND | ND | ND | ND |
| 08SAC7-456 | 7 | ND | ND | 0.166 | 0.17 | 0.0374 | 0.045 | 0.0287 | ND | 0.0517 | 0.0469 |
| 08SAC8-123 | 8 | ND | ND | 0.16 | 0.16 | 0.0328 | 0.0357 | 0.0206 | ND | 0.0394 | 0.03 |
| 08SAC8-4567 | 8 | ND | ND | 0.0667 | 0.0748 | 0.0198 | 0.0207 | 0.0126 | ND | 0.0207 | ND |
| 08SAC9-123 | 9 | ND | ND | 0.0365 | 0.0408 | ND | ND | ND | ND | ND | ND |
| 08SAC9-4567 | 9 | ND | ND | 0.0212 | 0.0379 | ND | ND | ND | ND | ND | ND |
| 08SAC10-123 | 10 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 08SAC10-4567 | 10 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 08SAC11-123 | 11 | ND | ND | 0.0529 | 0.142 | 0.0588 | ND | ND | ND | ND | ND |
| 08SAC11-456 | 11 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 08SAC12-123 | 12 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 08SAC13-123 | 13 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 08SAC13-123 | 13 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 08SAC14-123 | 14 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 08SAC16/18-123 | 16,17,18 | ND | ND | ND | ND | ND | ND | ND | ND | 0.133 | ND |
| 08SAC16/18-123 | 16,17,18 | ND | ND | ND | ND | ND | ND | ND | ND | 0.133 | ND |
| 08SAC16/18-123 | 16,17,18 | ND | ND | ND | ND | ND | ND | ND | ND | 0.133 | ND |
| 08SAC19-12 | 19 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 08SAC20-12 | 20 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 08SAC21-12 | 21 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 08SAC22-1 | 22 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC23-1 | 23 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC24-1 | 24 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC25-12 | 25 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC26-123 | 26 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC26-4567 | 26 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC27-1234 | 27 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC28-123 | 28 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC29-1234 | 29 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC30-1234 | 30 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC31-12 | 31 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC31-345 | 31 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC32-12 | 32 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC32-345 | 32 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC33-1234 | 33 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC34-12 | 34 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC34-345 | 34 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC35-12 | 35 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |
| 08SAC35-345 | 35 | ND | ND | ND | ND | -- | ND | ND | ND | ND | ND |

Notes:

-- : not analyzed or not applicable

< : compound was analyzed but not detected above the concentration listed

mg/kg : milligrams per kilogram

ND : compound was analyzed but not detected

PRG : Preliminary Remediation Goal

shaded yellow where value exceeds residential PRG

Values in parenthesis are rerun data results

OCPs : organochlorine pesticides

PAHs : polyaromatic hydrocarbons

PCBs : polychorinated biphenyls

SVOCs : semi-volatile organic compounds

TABLE 17
2008 Laboratory Results of Water Soluble Concentration in Sediments Collected from the Sacramento Deep Water Ship Channel

| Location ID | Reporting Limit | Arsenic | Barium | Cadmium | Calcium | Chromium | Copper | Lead | Mercury | Nickel | Selenium | Zinc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | µg/l | | | | | | | | | | |
| Reuse Limitations | | 10 | -- | -- | -- | -- | 10 | 2.5 | 0.05 | -- | -- | 100 |
| 08SAC-12-DiWET | 4 (2) | 5.5 | 23.4 | ND | -- | 7.8 | 23.95 (22.4) | 1.5 | <0.02 | 11.8 | 3.3 | 6.1 |
| 08SAC2-12-DiWet | 4 (2) | 4.1 | 29.1 | <4.0 | -- | 7.7 | (14) 0.1 | 2 | 0.052 | 7.3 | 1.3 | 11.7 |
| 08SAC3-1-DiWet | 4 (2) | 6.7 | 16.7 | <4.0 | -- | 5.2 | 7.2 | 0.8 | <0.02 | 9.2 | 1.7 | 6 |
| 08SAC4-12 DIWET | 4 (2) | 9.8 | 30.8 | <4.0 | -- | 7.9 | 33.3 (4.9) | 3.8 (1.1) | <0.02 | 6.1 | 1.2 | 10.1 |
| 08SAC5-123 DIWET | 4 (2) | 7.3 | 28.3 | <4.0 | -- | 7 | (45.7) (4) | 4.3 | <0.02 | 5.9 | 2.2 | 9.7 |
| 08SAC5-4567 DIWET | 4 (2) | 5.1 | 27.6 | <4.0 | -- | 6.1 | 20.9 (11.6) | 2.8 (2) | <0.02 | 6.7 | 1.2 | 9.9 |
| 08SAC6-1234 DIWET | 4 (2) | 9.2 | -- | <4.0 | -- | 11 | 34.6 (7.1) | 5.4 (1.8) | <0.02 | 9.4 | 1.7 | 16.8 |
| 08SAC6-5678 DIWET | 4 (2) | 4.5 | 17.4 | <4.0 | -- | 3.6 | 13.3 (3.3) | 1.3 | <0.02 | 3.3 | <4.0 | 5.2 |
| 08SAC7-123 DIWET | 4 (2) | 10.4 (2.4) | 28.1 | ND | <4.0 | 7.8 | 46.6 (6.9) | 5 | <0.02 | 6.4 | 1.7 | 9.4 |
| 08SAC7-4567 DIWET | 4 (2) | 6.3 | 33.2 | <4.0 | -- | 2.5 | 18.9 (4.5) | 1.4 | <0.02 | 3.9 | 1 | 14 |
| 08SAC8-123 DIWET | 4 (2) | 10.3 | 33 | <4.0 | -- | 5.6 | 40.9 (10.9) | 4.6 (1.8) | <0.02 | 5.7 | 1.5 | 13.2 |
| 08SAC8-4567 DIWET | 4 (2) | 4.1 | 28.1 | ND | -- | 5.1 | 19.3 (3.7) | 2.1 | <0.02 | 5.2 | <4.0 | 6.6 |
| 08SAC9-123 DIWET | 4 (2) | 3.8 | 12.4 | <4.0 | -- | 3.3 | 9.7 | 1.3 | <0.02 | 3.1 | <4.0 | 6.4 |
| 08SAC9-4567 DIWET | 4 (2) | 3.7 | 10.4 | <4.0 | -- | 2.6 | 4.7 | 0.7 | <0.02 | 2.9 | <4.0 | 4.9 |
| 08SAC10-123 DIWET | 4 (2) | 3.7 | 20.7 | <4.0 | -- | 3.7 | 15 | 2.1 | <0.02 | 3.1 | <4.0 | 5.6 |
| 08SAC10-4567 DIWET | 4 (2) | 1.6 | 8.1 | <4.0 | -- | 1.9 | 1.7 | 0.5 | <0.02 | 1.7 | <4.0 | 2 |
| 08SAC11-123 DIWET | 4 (2) | 2.5 | 12.7 | <4.0 | -- | 4.8 | 7.3 | 0.8 | <0.02 | 4.3 | <4.0 | 4.4 |
| 08SAC11-456 DIWET | 4 (2) | 1.4 | 8.6 | <4.0 | -- | 2.2 | 2.5 | <2.0 | <0.02 | 1.8 | <4.0 | 2.4 |
| 08SAC12-123 DIWET | 4 (2) | 1.8 | 10.3 | <4.0 | -- | 2.6 | 2.2 | <2.0 | <0.02 | 2.4 | <4.0 | 2.2 |
| 08SAC13-123 DIWET | 4 (2) | 2.2 | 7.5 | <4.0 | -- | 1.8 | 1.6 | <2.0 | <0.02 | 1.5 | <4.0 | 2 |
| 08SAC13-123 DIWET | 4 (2) | 1.8 | 7.4 | <4.0 | -- | 2.6 | 2.9 | <2.0 | <0.02 | 2.2 | <4.0 | 3.8 |
| 08SAC14-123 DIWET | 4 (2) | 3.3 | 51.5 | <4.0 | -- | 4.4 | 20.8 (6.7) | 2.4 | <0.02 | 5.1 | 1.1 | 4.8 |
| 08SAC16/18-123 DIWET | 4 (2) | 3.9 | 36.6 | <4.0 | -- | 4.7 | 42 (6.5) | 2.5 | <0.02 | 6.3 | 2.6 | 3.5 |
| 08SAC16/18-123 DIWET | 4 (2) | 3.9 | 36.6 | <4.0 | -- | 4.7 | 6.5 | 2.5 | <0.02 | 6.3 | 2.6 | 3.5 |
| 08SAC16/18-123 DIWET | 4 (2) | 3.9 | 36.6 | <4.0 | -- | 4.7 | 6.5 | 2.5 | <0.02 | 6.3 | 2.6 | 3.5 |
| 08SAC19-12 DIWET | 4 (2) | 4.1 | 44.6 | <4.0 | -- | 1 | 6.1 | <2.0 | <0.02 | 2.3 | <4.0 | <4.0 |
| 08SAC20-12 DIWET | 4 (2) | 8.3 | 28.6 | <4.0 | -- | 1.7 | 7.6 | <2.0 | <0.02 | 3.1 | <4.0 | <4.0 |
| 08SAC21-12 DIWET | 4 (2) | 11 | 28.1 | <4.0 | -- | 4 | 9.2 | 0.5 | <0.02 | 5.3 | <4.0 | 3.6 |
| 08SAC22-1 DIWET | 4 (2) | 11.5 (12.0) | 22.1 | <4.0 | -- | 2.9 | 1.5 | <2.0 | <0.02 | 3 | <4.0 | 1.8 |
| 08SAC23-1 DIWET | 4 (2) | 15.5 (15.9) | 14.7 | <4.0 | -- | 2 | <4.0 | <2.0 | <0.02 | 2.3 | <4.0 | ND |
| 08SAC24-1 DIWET | 4 (2) | 11.9 (11.3) | 20.5 | <4.0 | -- | 3.1 | 5.5 | <2.0 | <0.02 | 4.3 | <4.0 | 2 |
| 08SAC25-12 DIWET | 4 (2) | 8.8 | 29.6 | <4.0 | -- | 1.5 | 1.6 | <4.0 | <0.02 | 2.5 | <4.0 | <4.0 |
| 08SAC26-123 DIWET | 4 (2) | 8 | 36 | <4.0 | -- | 3.1 | 6.7 | <2.0 | <0.02 | 4.9 | <4.0 | 1.9 |
| 08SAC26-4567 DIWET | 4 (2) | 6 | 34.6 | ND | -- | 1.7 | 1.6 | <2.0 | <0.02 | 2.8 | <4.0 | <4.0 |
| 08SAC27-1234 DIWET | 4 (2) | 5.7 | 25.4 | ND | -- | 1.8 | 5.3 | 0.7 | <0.02 | 2.1 | <4.0 | 8.3 |
| 08SAC28-123 DIWET | 4 (2) | 4.6 | 35.1 | ND | -- | 1.7 | 1.4 | ND | <0.02 | 1.8 | -- | 5 |
| 08SAC29-1234 DIWET | 4 (2) | 5.8 | 28 | ND | -- | 1.8 | 5.8 | 0.4 | <0.02 | 2.2 | -- | 3.9 |
| 08SAC30-1234 DIWET | 4 (2) | 6.5 | 30.6 | ND | -- | 2.2 | 10.5 (2.1) | 1.9 | <0.02 | 2.1 | -- | 4.3 |
| 08SAC31-12 DIWET | 4 (2) | 4.8 | 39.3 | ND | -- | 1.7 | 4.3 | ND | <0.02 | 2 | <4.0 | 4.6 |
| 08SAC31-345 DIWET | 4 (2) | 4.1 | 35.2 | ND | -- | 2.4 | 10.6 (2.4) | ND | <0.02 | 2 | <4.0 | 9.6 |
| 08SAC32-12 DIWET | 4 (2) | 6.6 | 30.3 | ND | -- | 1.5 | 6.7 | 1.1 | <0.02 | 1.5 | 0.7 (1.1) | 2.5 |
| 08SAC32-345 DIWET | 4 (2) | 11.9 | 25.5 | ND | -- | 2.6 | 38.1 (3.2) | 8 | <0.02 | 2.7 | 1.2 | 9.5 |
| 08SAC33-1234 DIWET | 4 (2) | 5.3 | 30.6 | ND | -- | 1.5 | 3.9 | 0.8 | <0.02 | 2.4 | 0.89 | 30.9 |
| 08SAC34-12 DIWET | 4 (2) | 6.8 | 24 | ND | -- | 1.6 | 2.4 | 0.5 | <0.02 | 1.8 | 1.2 | 20.2 |
| 08SAC34-345 DIWET | 4 (2) | 6.6 | 24 | ND | -- | 1.5 | 6.1 | 0.4 | <0.02 | 1.8 | 0.3 | 12.3 |
| 08SAC35-12 DIWET | 4 (2) | 6.8 | 30.5 | ND | -- | 1.9 | 4.2 | 0.6 | <0.02 | 2 | 1 (1.2) | 8.8 |
| 08SAC35-345 DIWET | 4 (2) | 13.1 | 28.3 | ND | -- | 1.6 | 5.1 | 1.1 | <0.02 | 1.7 | 0.83 | 5.1 |

Notes:

-- : not analyzed, not applicable

< : analyzed, but not detected above the concentration listed

ND : analyzed but not detected

µg/l : micrograms per liter

shaded yellow where value exceeds screening criteria

Values in parenthesis are rerun data results

Reuse Limitations per WDR R5-2009-0085

TABLE 18
2008 Laboratory Results of Grain Size of Sediments Collected from the
Sacramento Deep Water Ship Channel

| River Mile | SAC Number | Sample ID | Percent Passing through sieve | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 4 | 10 | 20 | 40 | 30 | 140 | 200 |
| | | | 4.750 | 2.000 | 0.850 | 0.425 | 0.250 | 0.106 | 0.075 |
| 1 | 08SAC1-12 | 9012001-09 | 100.0 | 99.9 | 98.8 | 97.0 | 91.9 | 87.2 | 86.2 |
| 2 | 08SAC2-12 | 9012001-10 | 99.9 | 99.9 | 99.3 | 74.1 | 31.3 | 14.9 | 12.6 |
| 3 | 08SAC3-1 | 9012001-11 | 100.0 | 99.9 | 97.9 | 92.8 | 88.9 | 80.3 | 75.1 |
| 4 | 08SAC4-12 | 9012001-12 | 100.0 | 99.9 | 99.7 | 92.4 | 85.0 | 53.6 | 49.1 |
| 5 | 08SAC5-123 | 9012001-13 | 99.6 | 99.4 | 99.3 | 98.0 | 94.9 | 65.2 | 54.2 |
| 5 | 08SAC5-4567 | 9012001-14 | 99.2 | 99.0 | 98.3 | 88.7 | 76.8 | 53.4 | 48.4 |
| 6 | 08SAC6-1234 | 9012001-15 | 99.8 | 99.5 | 99.2 | 90.8 | 58.4 | 33.6 | 31.5 |
| 6 | 08SAC6-5678 | 9012001-16 | 99.9 | 99.7 | 99.4 | 97.0 | 83.9 | 40.1 | 36.9 |
| 7 | 08SAC7-123 | 9012001-17 | 100.0 | 99.9 | 99.9 | 99.3 | 91.2 | 52.0 | 44.0 |
| 7 | 08SAC7-4567 | 9012001-18 | 99.9 | 99.7 | 99.5 | 98.7 | 77.8 | 53.8 | 48.4 |
| 8 | 08SAC8-123 | 9012001-19 | 100.0 | 100.0 | 99.8 | 97.4 | 75.4 | 53.2 | 47.2 |
| 8 | 08SAC8-4567 | 9012001-20 | 99.7 | 99.5 | 99.2 | 97.5 | 64.6 | 39.3 | 33.4 |
| 9 | 08SAC9-123 | 9012001-21 | 99.7 | 99.4 | 98.8 | 91.5 | 40.4 | 25.4 | 23.2 |
| 9 | 08SAC9-4567 | 9012001-22 | 99.6 | 99.5 | 99.2 | 85.3 | 17.1 | 8.3 | 7.7 |
| 10 | 08SAC10-123 | 9012701-01 | 99.8 | 99.6 | 99.1 | 84.8 | 13.0 | 4.8 | 4.6 |
| 10 | 08SAC10-4567 | 9012701-02 | 98.7 | 98.0 | 96.4 | 74.9 | 12.3 | 4.1 | 3.8 |
| 11 | 08SAC11-123 | 9012701-03 | 98.9 | 98.4 | 96.3 | 69.4 | 23.2 | 11.4 | 10.7 |
| 11 | 08SAC11-456 | 9012701-04 | 99.3 | 98.1 | 95.5 | 68.7 | 13.3 | 4.3 | 3.9 |
| 12 | 08SAC12-123 | 9012701-05 | 98.8 | 97.9 | 94.9 | 59.6 | 8.5 | 3.9 | 3.7 |
| 13 | 08SAC13-123 | 9012701-06 | 96.2 | 94.3 | 90.2 | 38.2 | 5.7 | 2.7 | 2.5 |
| 13 | 08SAC13-456 | 9012701-07 | 96.2 | 94.3 | 90.2 | 38.2 | 5.7 | 2.7 | 2.5 |
| 14 | 08SAC14-123 | 9012701-08 | 99.5 | 98.9 | 98.3 | 91.5 | 71.0 | 46.5 | 44.0 |
| 16,17,18 | 08SAC16/18-123 | 9012701-09 | 100.0 | 99.9 | 98.9 | 90.6 | 71.1 | 64.2 | 63.2 |
| 19 | 08SAC19-12 | 9012701-10 | 97.9 | 96.5 | 94.4 | 89.1 | 69.3 | 34.3 | 29.7 |
| 20 | 08SAC20-12 | 9012701-11 | 99.7 | 98.6 | 95.5 | 88.1 | 67.7 | 44.5 | 42.1 |
| 21 | 08SAC21-12 | 9012701-12 | 99.8 | 98.5 | 97.1 | 94.5 | 84.6 | 57.8 | 53.2 |
| 22 | 08SAC22-1 | 9012701-13 | 99.9 | 99.5 | 97.5 | 96.0 | 89.0 | 77.9 | 76.8 |
| 23 | 08SAC23-1 | 9012701-14 | 99.9 | 99.7 | 97.2 | 95.6 | 93.1 | 88.4 | 86.0 |
| 24 | 08SAC24-1 | 9012701-15 | 99.8 | 99.1 | 97.9 | 93.6 | 77.0 | 52.5 | 49.3 |
| 25 | 08SAC25-12 | 9012701-16 | 95.9 | 91.6 | 88.6 | 83.3 | 74.0 | 92.3 | 57.7 |
| 26 | 08SAC26-123 | 9012701-17 | 86.2 | 79.5 | 72.7 | 60.6 | 45.8 | 35.1 | 32.1 |
| 26 | 08SAC26-4567 | 9012701-18 | 94.7 | 90.3 | 84.2 | 73.1 | 56.4 | 44.3 | 40.3 |
| 27 | 08SAC27-1234 | 9020301-11 | 95.3 | 86.5 | 78.9 | 67.9 | 56.6 | 43.2 | 39.6 |
| 28 | 08SAC28-123 | 9020301-12 | 99.2 | 97.6 | 95.6 | 91.1 | 81.8 | 64.2 | 58.6 |
| 29 | 08SAC29-1234 | 9020301-13 | 84.8 | 76.3 | 71.2 | 63.8 | 54.6 | 45.1 | 40.7 |
| 30 | 08SAC30-1234 | 9020301-14 | 88.8 | 77.7 | 72.0 | 65.1 | 58.1 | 52.5 | 49.5 |
| 31 | 08SAC31-12 | 9020301-15 | 95.4 | 88.6 | 84.6 | 81.5 | 79.2 | 75.2 | 71.9 |
| 31 | 08SAC31-345 | 9020301-16 | 89.2 | 78.9 | 75.9 | 72.5 | 66.8 | 59.0 | 57.0 |
| 32 | 08SAC32-12 | 9020301-17 | 99.7 | 98.4 | 93.9 | 83.8 | 72.1 | 55.4 | 50.8 |
| 32 | 08SAC32-345 | 9020301-18 | 99.9 | 99.1 | 95.8 | 83.8 | 67.9 | 60.0 | 57.6 |
| 33 | 08SAC33-1234 | 9020301-19 | 86.3 | 76.9 | 72.5 | 66.2 | 59.1 | 52.4 | 50.9 |
| 34 | 08SAC34-12 | 9020301-20 | 97.3 | 97.0 | 93.2 | 85.3 | 67.8 | 52.3 | 49.0 |
| | | Average percent passing : | 97.5 | 95.4 | 93.0 | 82.2 | 60.1 | 45.0 | 41.2 |
| | Material retained by sieve is characterized as : | | gravel | | | sand | | | silt |

Notes:

| |
|---|
| Sieve Mesh Number |
| Sieve Mesh Diameter (mm) |

Table 19

Permits and Approvals Potentially Required for the Placement and Reuse of Dredged Sediments

| Regulatory Authority/Permit | Agency | Stockpile Only Sites | | New Placement and Reuse Sites | | | | | New Reuse Only Sites | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Existing[1] | New (Upland only) | Levees[2] (landside only) | Subsidence Reversal | Habitat Development (wetlands) | Construction Fill | Filling or Shallowing of Channels | Levees[2] (landside only) | Levees (Along Rail Lines) | Habitat Development (wetlands) | Construction Fill | Landfill Cover | Antioch Dunes NWR |
| | **Federal** | | | | | | | | | | | | | |
| Section 404 Individual Permit/Section 7 Consultation & Section 10 of the Rivers and Harbors Act of 1899 | U.S. Army Corps of Engineers | -- | -- | -- | -- | X | -- | X | -- | -- | X | -- | -- | -- |
| Section 7 Consultant | U.S. Fish & Wildlife Service | -- | -- | X | X | X | X | X | X | X | X | X | X | X |
| Section 7 Consultant | National Marine Fisheries Service Consultation | -- | -- | X | X | X | X | X | X | X | X | X | X | X |
| Clean Water Act and NEPA | U.S. Environmental Protection Agency | -- | -- | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD |
| Review of permit application | US Coast Guard | LD | LD | -- | -- | LD | -- | X | -- | -- | LD | -- | -- | -- |
| | **State** | | | | | | | | | | | | | |
| Section 401 Water Quality Certification/Discharge requirements/Dewatering General Permit NOI/Construction Storm Water General Permit NOI | Regional Water Quality Control Board | -- | -- | -- | -- | X | -- | X | -- | -- | X | -- | -- | -- |
| CA Water Code / Porter Cologne Act | | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 2081(b) Incidental Take Permit/2820.1 Consultation/CEQA Review and 1601-1603 Streambed Alteration Agreement | California Department of Fish & Game | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD |
| Land Use Leases, Encroachment Permits, Access Agreements | State Lands Commission | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD |
| | California Department of Water Resources | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD |
| | Reclamation Districts | X | X | X | X | X | X | X | X | X | X | X | X | X |
| | California Department of Parks and Recreation | -- | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD |
| Authority to construct permit to operate | Regional Air Quality Management Districts (e.g., San Joaquin Valley, Sacramento etc) | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD |
| California Bay-Delta Act of 2003 | California Bay-Delta Authority | | | | | | | | | | | | | |
| ROW or encroachment permit | California Department of Transportation | -- | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD |
| Usually address during CEQA/NEPA EIS/EIR process | Office of Historic Preservation & Advisory Council on Historic Preservation | -- | X | X | X | X | X | X | X | X | X | X | X | X |
| | Native American Heritage Commission | -- | X | X | X | X | X | X | X | X | X | X | X | X |
| | **County** | | | | | | | | | | | | | |
| County and State Plans, Policies, Regulations, Codes | Contra Costa, Sacramento, San Joaquin, Solano, Yolo | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD |
| | **Municipal** | | | | | | | | | | | | | |
| Municipal, County and State Plans, Policies, Regulations, Codes | In study area | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD |
| | **Potential Stakeholders** | | | | | | | | | | | | | |
| -- | Landowner | LD | LD | LD | LD | LD | LD | LD | LD | X | LD | LD | LD | LD |
| -- | Deltakeeper Chapter, Sierra Club, NRDC, Audobon Society | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD |
| -- | Local environmental interest groups | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD | LD |

NOTES:

X - Permit and/or approval is necessary

LD - Permit and approval needs are Location Dependent.

1 -Existing sites are assumed to have permits in place. Therefore, Project proponent would need to review permits for each existing site to determine conditions for use of that site.

2 - Placement and Reuse sites for Levees are typically referred to as "pumping in the levee"

In all cases, the Project proponent, landowner, and/or agency will review EIR/EIS to determine if the location requires additional environmental documentation for impacts related to their purview.

If placement site is within agency jurisdiction a permit or approval will be necessary. Agency needs will be identified and possibly met using information provided in the EIR/EIS for either the project or individual placement site.

TABLE 21

COMPARISON OF ESTIMATED DREDGE VOLUMES with STOCKPILE SITE CAPACITY and REUSE DEMAND at PR SITES

SACRAMENTO DWSC

| | | DWSC Reach : | Reach 1 | Reach 2 | Reach 3 | Reach 4 | Reach 5 | Total |
|---|---|---|---|---|---|---|---|---|
| | | Estimated Dredge Volume [1] : | 350,000 | 3,700,000 | 250,000 | 3,700,000 | 1,900,000 | 9,900,000 |
| Within 10,000 feet | Stockpile Sites | Effective Capacity | 374,000 | 2,467,000 | 763,000 | 308,000 | 492,000 | 4,404,000 |
| | | Surplus or Deficit | 24,000 | -1,233,000 | 513,000 | -3,392,000 | -1,408,000 | -5,496,000 |
| | Placement and Reuse Sites | Sediment Volume [2] | 0 | 1,950,000 | 0 | 0 | 0 | 1,950,000 |
| | | Surplus or Deficit | -350,000 | -1,750,000 | -250,000 | -3,700,000 | -1,900,000 | -7,950,000 |
| | Both S and PR Sites | Capacity + Volume | 374,000 | 4,417,000 | 763,000 | 308,000 | 492,000 | 6,354,000 |
| | | Surplus or Deficit | 24,000 | 717,000 | 513,000 | -3,392,000 | -1,408,000 | -3,546,000 |
| Within 20,000 feet | Stockpile Sites | Effective Capacity | 1,676,000 | 4,667,000 | 3,437,000 | 1,059,000 | 492,000 | 11,331,000 |
| | | Surplus or Deficit | 1,326,000 | 967,000 | 3,187,000 | -2,641,000 | -1,408,000 | 1,431,000 |
| | Placement and Reuse Sites | Sediment Volume [2] | 10,000 | 2,350,000 | 650,000 | 0 | 0 | 3,010,000 |
| | | Surplus or Deficit | -340,000 | -1,350,000 | 400,000 | -3,700,000 | -1,900,000 | -6,890,000 |
| | Both S and PR Sites | Capacity + Volume | 1,686,000 | 7,017,000 | 4,087,000 | 1,059,000 | 492,000 | 14,341,000 |
| | | Surplus or Deficit | 1,336,000 | 3,317,000 | 3,837,000 | -2,641,000 | -1,408,000 | 4,441,000 |
| Within 30,000 feet | Stockpile Sites | Effective Capacity | 1,815,000 | 8,249,000 | 6,565,000 | 1,320,000 | 605,000 | 18,554,000 |
| | | Surplus or Deficit | 1,465,000 | 4,549,000 | 6,315,000 | -2,380,000 | -1,295,000 | 8,654,000 |
| | Placement and Reuse Sites | Sediment Volume [2] | 470,000 | 4,300,000 | 3,350,000 | 0 | 0 | 8,120,000 |
| | | Surplus or Deficit | 120,000 | 600,000 | 3,100,000 | -3,700,000 | -1,900,000 | -1,780,000 |
| | Both S and PR Sites | Capacity + Volume | 2,285,000 | 12,549,000 | 9,915,000 | 1,320,000 | 605,000 | 26,674,000 |
| | | Surplus or Deficit | 1,935,000 | 8,849,000 | 9,665,000 | -2,380,000 | -1,295,000 | 16,774,000 |
| Within 40,000 feet | Stockpile Sites | Effective Capacity | 2,695,000 | 9,216,000 | 7,416,000 | 3,583,000 | 605,000 | 23,515,000 |
| | | Surplus or Deficit | 2,345,000 | 5,516,000 | 7,166,000 | -117,000 | -1,295,000 | 13,615,000 |
| | Placement and Reuse Sites | Sediment Volume [2] | 5,852,000 | 7,962,000 | 6,400,000 | 50,000 | 0 | 20,264,000 |
| | | Surplus or Deficit | 5,502,000 | 4,262,000 | 6,150,000 | -3,650,000 | -1,900,000 | 10,364,000 |
| | Both S and PR Sites | Capacity + Volume | 8,547,000 | 17,178,000 | 13,816,000 | 3,633,000 | 605,000 | 43,779,000 |
| | | Surplus or Deficit | 8,197,000 | 13,478,000 | 13,566,000 | -67,000 | -1,295,000 | 33,879,000 |
| Within 50,000 feet | Stockpile Sites | Effective Capacity | 3,530,000 | 9,762,000 | 8,633,000 | 5,478,000 | 605,250 | 28,008,250 |
| | | Surplus or Deficit | 3,180,000 | 6,062,000 | 8,383,000 | 1,778,000 | -1,294,750 | 18,108,250 |
| | Placement and Reuse Sites | Sediment Volume [2] | 7,332,000 | 9,722,000 | 7,532,000 | 2,900,000 | 0 | 27,486,000 |
| | | Surplus or Deficit | 6,982,000 | 6,022,000 | 7,282,000 | -800,000 | -1,900,000 | 17,586,000 |
| | Both S and PR Sites | Capacity + Volume | 10,862,000 | 19,484,000 | 16,165,000 | 8,378,000 | 605,250 | 55,494,250 |
| | | Surplus or Deficit | 10,512,000 | 15,784,000 | 15,915,000 | 4,678,000 | -1,294,750 | 45,594,250 |

Notes:

All quantities in bank cubic yards

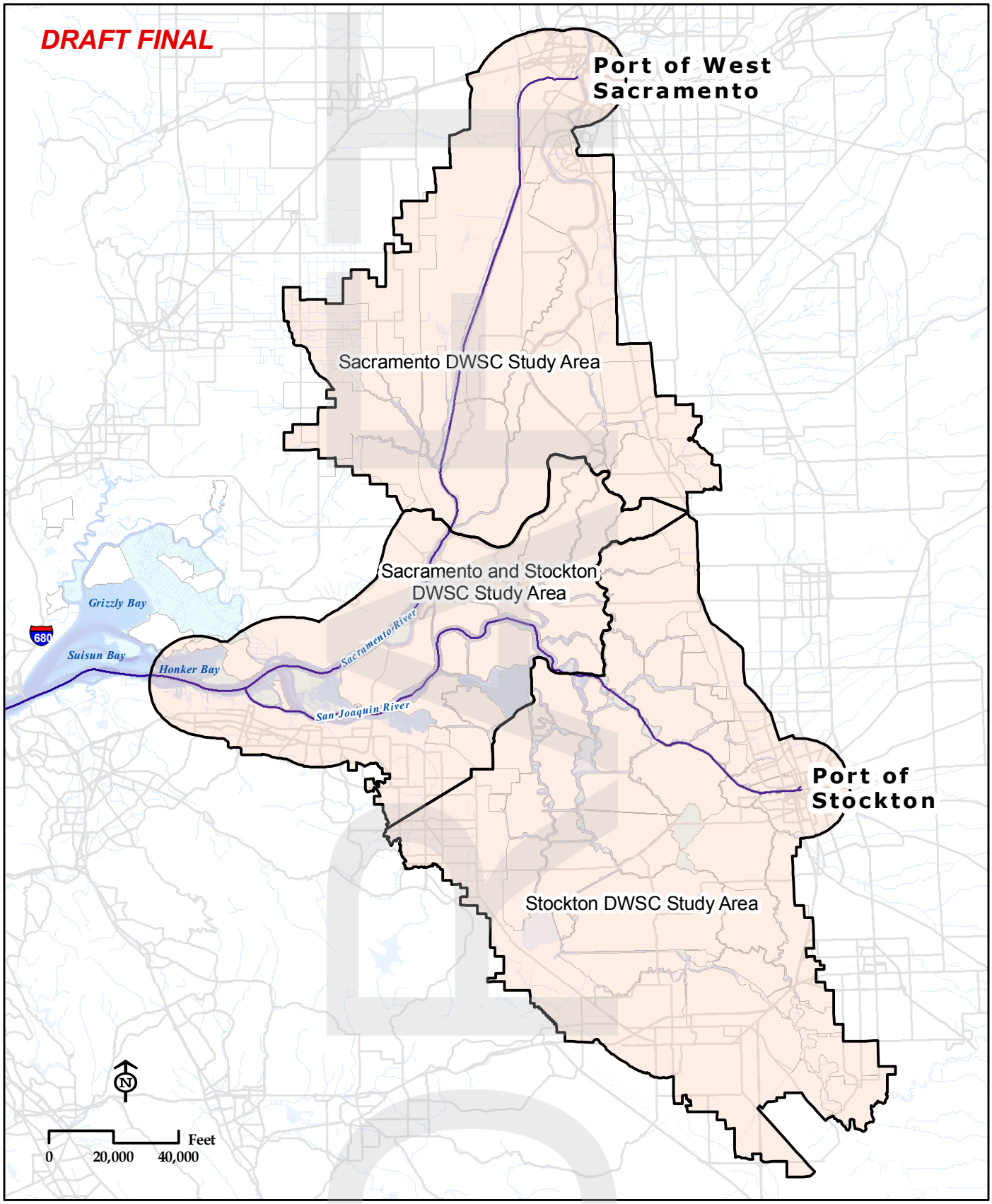
Stockpile Sites and PR Sites include existing and potential (as provided by the RDs)

Estimated effective capacities of Stockpile sites and volume of PR sites could increase with additional information.

1 - Provided by USACE

2 - Excludes the 17M cubic yards available from Montezuma facility

# FIGURES



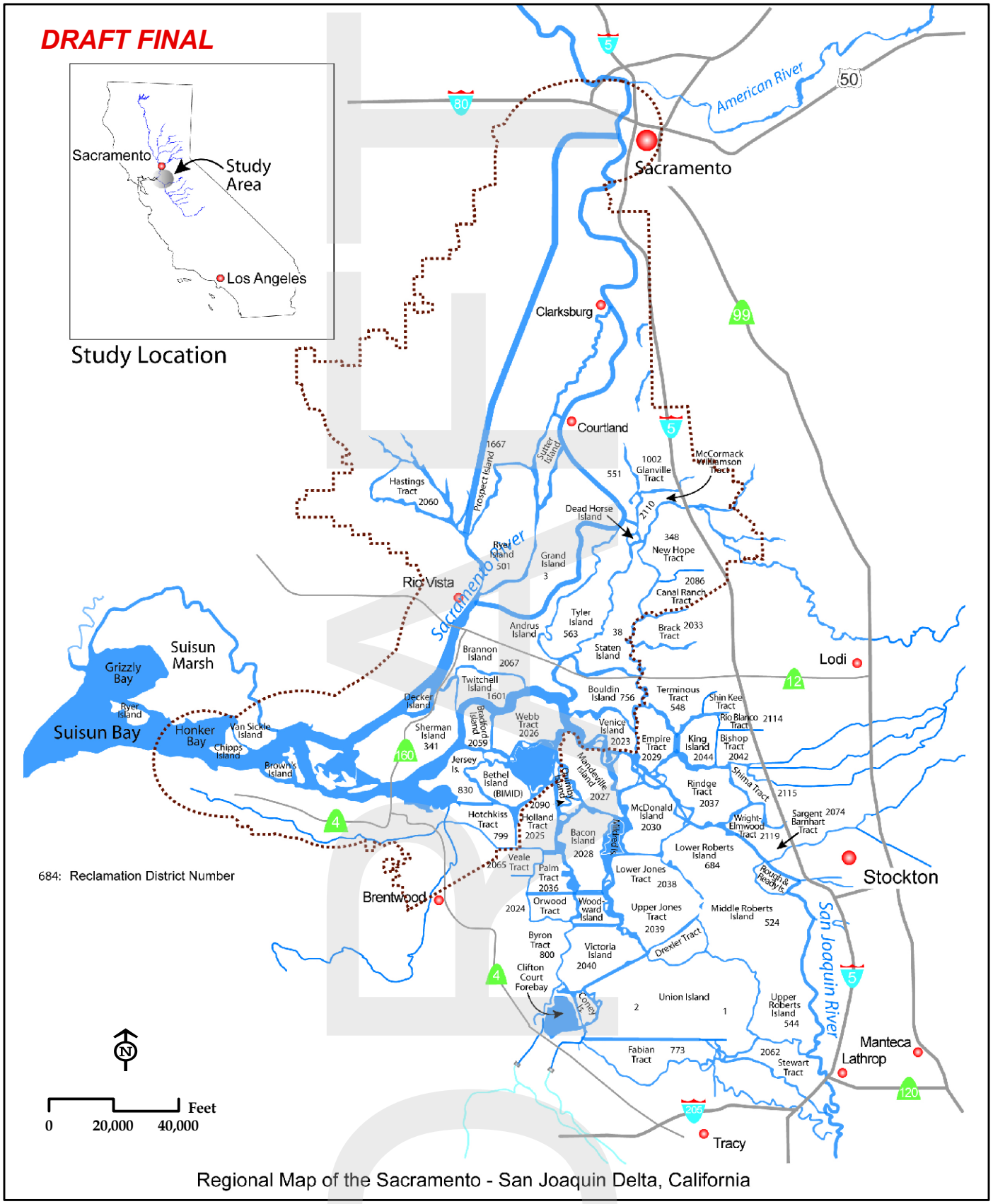

APPLIED WATER RESOURCES

FIGURE - 1

**DWSC Study Areas**

Sacramento DWSC

05/04/2010




APPLIED WATER RESOURCES

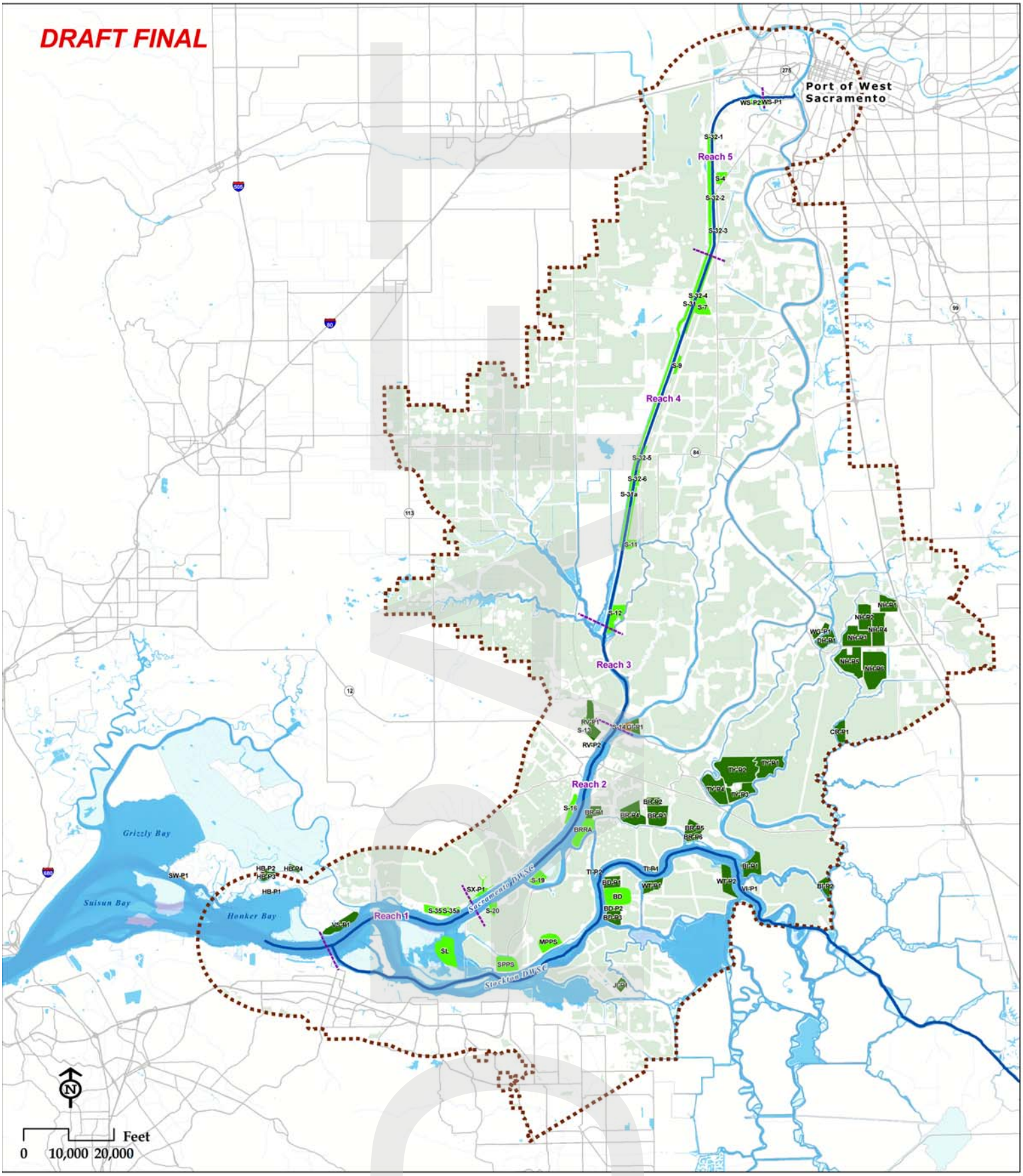
Sacramento DWSC Study Area

FIGURE - 2

**DWSC Base Map**

Sacramento DWSC

05/04/2010




APPLIED WATER RESOURCES

Legend

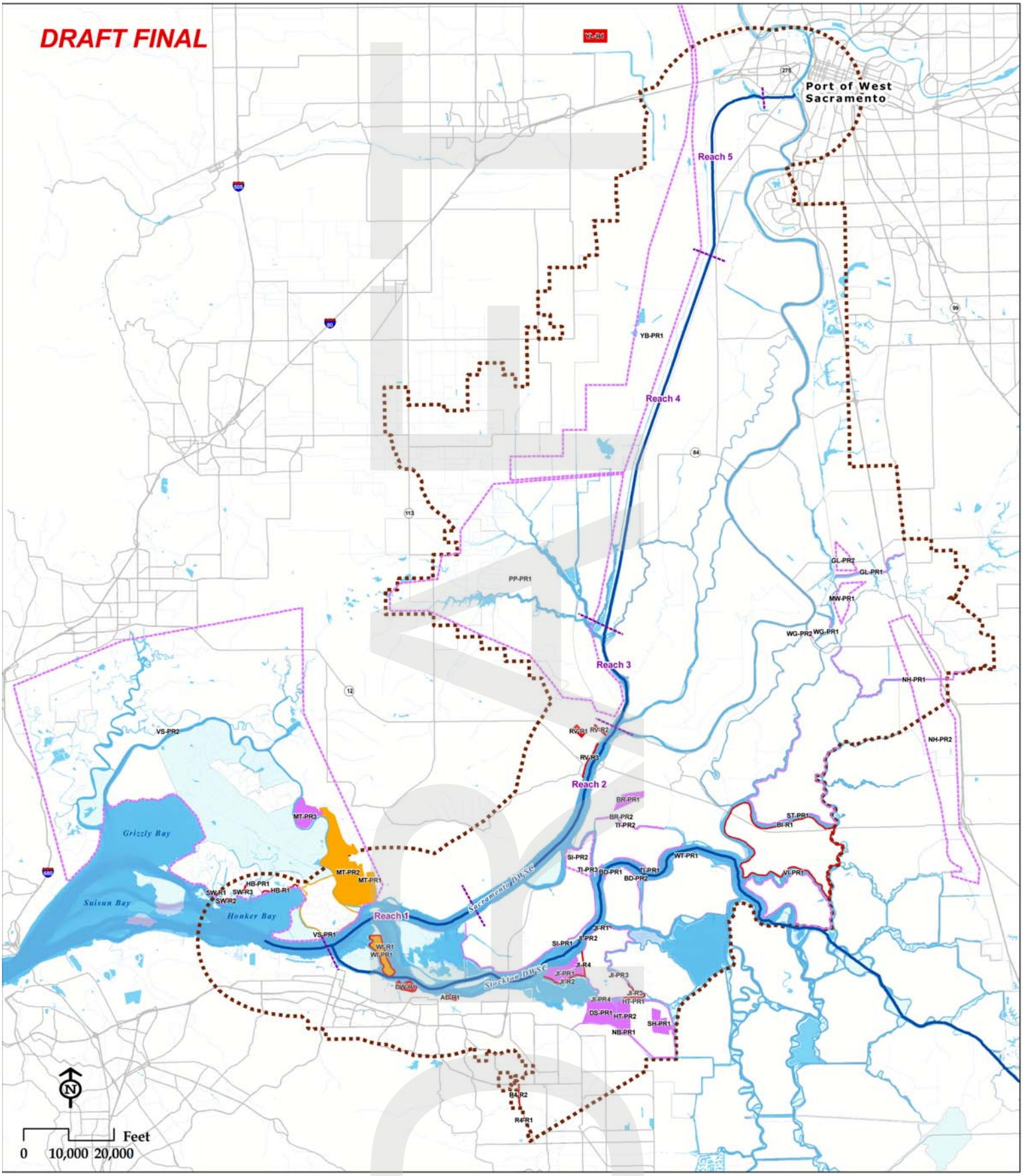
- Deep Water Ship Channels
- Nonsensitive Areas
- Existing Stockpile Site
- Sacramento DWSC Study Area
- Potential Stockpile Site
- Former Stockpile Site

**FIGURE - 3**

# Stockpile Sites

**Sacramento DWSC**

05/18/2010




APPLIED WATER RESOURCES

**Legend**

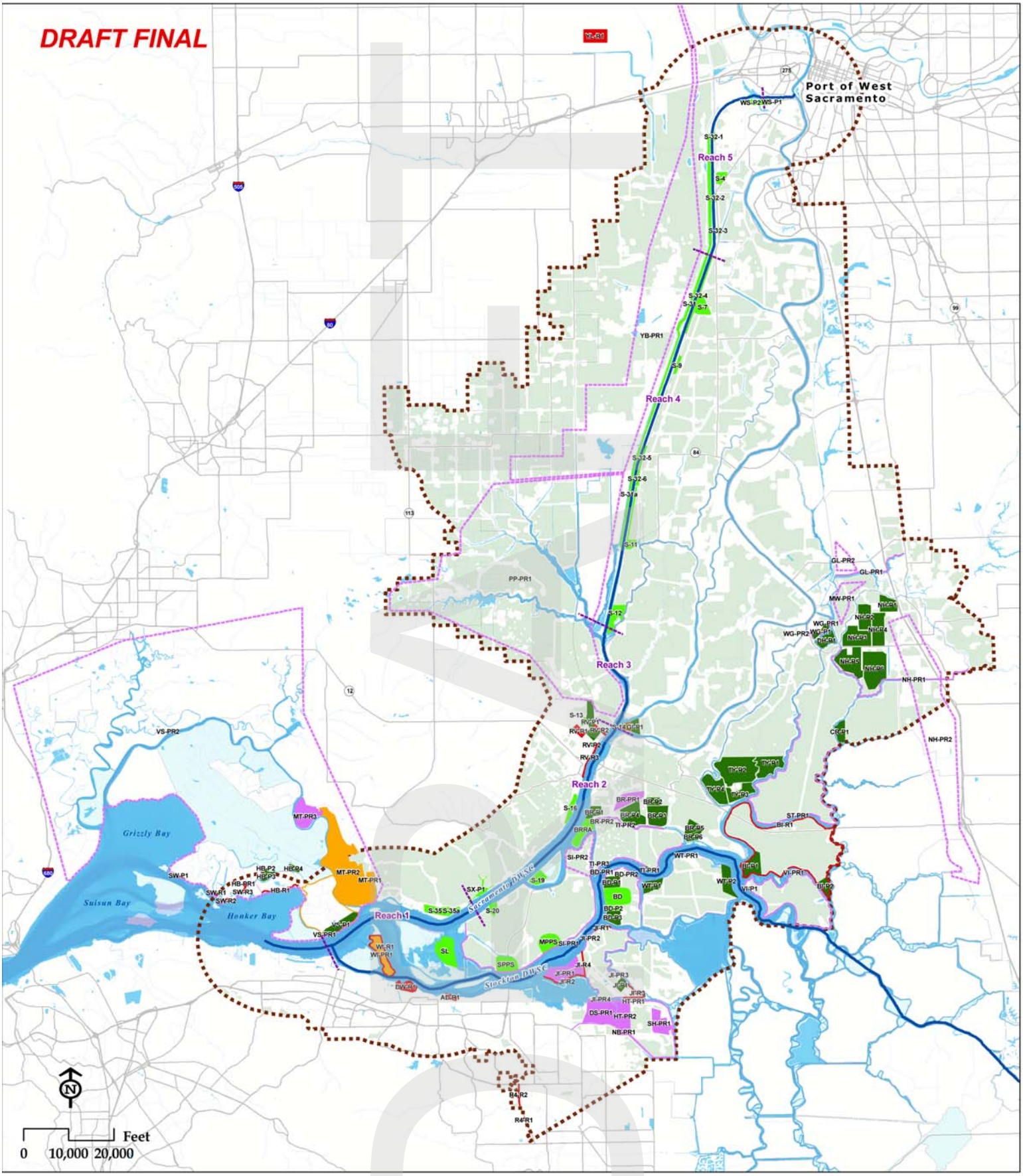
- Deep Water Ship Channels
- Potential Reuse Site
- Existing Placement and Reuse Site
- Sacramento DWSC Study Area
- Potential Placement and Reuse Site
- Potential Placement and Reuse Site - BDCP

**FIGURE - 4**

# Reuse Sites

**Sacramento DWSC**

05/18/2010




Legend

- Deep Water Ship Channels
- Nonsensitive Areas
- Existing Stockpile Site
- Potential Stockpile Site
- Former Stockpile Site
- Sacramento DWSC Study Area
- Potential Reuse Site
- Existing Placement and Reuse Site
- Potential Placement and Reuse Site
- Potential Placement and Reuse Site - BDCP

APPLIED WATER RESOURCES

**FIGURE - 5**

# Stockpile & Reuse Sites

**Sacramento DWSC**

05/17/2010

# APPENDICES

# APPENDIX A

# CONTACT NOTES

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |

| | |
|---|---|
| **Organization** | Aqua Clear Farms |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Operator: Aqua Clear Farms, Inc, Highway 113 And Flannery Road, Rio Vista, 94571, Solano, (707) 374-2559 |
| **Projects** | Disposal, Treatment Unit (in situ) |
| **Comments** | |
| **Contact Record** | 1/15/10 - Doug Tingey, owner, 916-416-0247. Talked to him; he will call back if potential use.<br>2/2/10 - no call back - assume no use. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |

| | |
|---|---|
| **Organization** | Barajas Tree Farm |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Operator: Barajas, Miguel, Jr., 9306 Robson Road, Galt, 95632, Sacramento, (209) 744 -8533 |
| **Projects** | Composting, Composting Operation (Ag); Composting, Composting Operation (Ag) |
| **Comments** | |
| **Contact Record** | 1/15/10 - Left message; please call back if you have a potential use.<br>2/2/10 - No return call, assume no use. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | CCW Wood Chipping / Grinding |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Operator: Contra Costa Waste Services, 1300 Loveridge Road, Pittsburg, 94565, Contra Costa, Nicole at 925-692-2224 |
| **Projects** | Composting, Chipping and Grinding Activity Fac./ Op. |
| **Comments** | |
| **Contact Record** | 1/15/10 - Left message; please call back if you have a potential use.<br>1/20/10 - Called back, Jim, no need. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | D.R. Horton |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | N. Cal. ... (925) 225-7400 |
| **Projects** | Discovery Bay, Vacaville, Sacramento (Laguna Pointe Condominiums) |
| **Comments** | Referred by Brentwood Community Development by Casey McCann. |
| **Contact Record** | 1/15/10 - Dean Mills, planning - left message.<br>2/2/10 - Did not get back to me, assume no interest. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |

| | |
|---|---|
| **Organization** | Davis Waste Removal`s Green Material Op. |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Operator: Davis Waste Removal, 26375 County Road 105D, Davis, 95616, Yolo, (530) 756-4646 |
| **Projects** | Composting, Chipping and Grinding Activity Fac./ Op. |
| **Comments** | |
| **Contact Record** | 1/15/10 - Talked to them, no need. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | Yes | **Reuse** | Yes | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | Delta Wetlands, a CA Corp – Semitropic Water Storage District - WDS |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Jones & Stokes Sacramento - Megan Smith (916) 737-3000<br>Dave Forcall - Delta Wetland contact |
| **Projects** | Delta Wetlands - Bacon, Bouldin, Webb, Holland Islands |
| **Comments** | See MBK maps for the use info. |
| **Contact Record** | 12/17/09 - Jones & Stokes Sacramento - - Megan Smith (916) 737-3000 –she will get back to me after talking with the engineers 12/17/09<br>1/6/10 - Spoke again with Megan Smith who is going to recheck with engineers at WDS, the funders for the project.<br>1/20/10 - Megan called back and referred me to Dave Forkel - General Manager . Delta Wetlands dave.forkel@zks.com. Sent him an email. 1660 Olympic Blvd, Suite 350, Walnut Creek, California 94596, Telephone: (925) 932-0251, info@deltawetlands.com. This potential user is covered in the following reclamation districts: Boulin Island RD 756, Holland Island RD 2025, Webb Island RD 2026, Bacon Island RD 2028 - all handled by MBK Engineers with whom we have met. Holland and Webb have a good on-site sand suply; Boulin and Bacon could use materials. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | Yes | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | Dow Wetlands Preserve Community Outreach |
| **Organization Type** | Corporate |
| **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | (925) 432-5576, Patti |
| **Projects** | Dow Wetlands Preserve |
| **Comments** | |
| **Contact Record** | 12/17/09 - Spoke to Patti, referred me to Krist Jensen 925-778-0720, levee breach kjteam@comcast.net - has placement and reuse (levee repair and elevation enhancement)<br>12/21/09 - Sent Krist an email request for details<br>1/15/10 - Resent the email.<br>1/22/10 - Talked - response being delayed by attorneys.<br>2/23/10 - Sent him an email to light a fire under the attorneys! He responded, "The Dow legal folks are a definite NO. They do not think the material would be clean enough. If you want to plead your case further please call the Pittsburg facilities manager, Tim Byer, (925) 432-5112.<br>Sorry, Krist Jensen". I took their conclusion at face value - no uses although I did inform Krist that their assumption about cleanliness of sediments may be wrong.<br>3/2/10 - We decided to put them on the map anyway since their conclusions are perhaps unwarranted. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |

| | |
|---|---|
| **Organization** | Jepson Prairie Organics Composting Fac |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Operator: Recology - Norcal Waste Systems Inc. (Hay Rd. - LF), 6426 Hay Road, Vacaville, 95687, Solano, (800) 208-2370, http://www.jepsonprairieorganics.com/contact.php |
| **Projects** | Composting, Composting Facility (Green Waste);Disposal, ACW Disposal Site; Disposal, Solid Waste Landfill |
| **Comments** | |
| **Contact Record** | 1/8/10 - Routed to Dawn Divinti, 707-678-4718, ext 24; Ron Hurst 707-693-2128, 707-249-3184. Did not leave message - call Ron again.<br>1/15/10 - left message. He called back will check with landfill managers.<br>2/2/10 - He did not call back - assume not use. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |

| | |
|---|---|
| **Organization** | K&M Recycling Recycle America Alliance |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Operator: K&M Recycling Recycle American Alliance, 3562 Ramona Ave, Sacramento, 95826, Sacramento, 916-452-0142, http://www.wm.com/Templates/FAC5072/community.asp |
| **Projects** | Composting, Composting Facility (Green Waste) |
| **Comments** | |
| **Contact Record** | 1/15/10 - Contact made, no use. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | Keller Canyon Landfill |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Operator: Keller Canyon Landfill, 901 Bailey Road, Pittsburg, 94565, Contra Costa, http://www.cccounty.us/index.aspx?NID=2165, Contact Telma Moreira at (925) 335-1217 |
| **Projects** | Disposal, Solid Waste Landfill |
| **Comments** | |
| **Contact Record** | 1/8/10 - Contacted Telma Moreira, county planning division, telma.moreira@dcd.cccounty.us and she will check with Keller and John Kapelchek of Planning (see other contact sheet). I sent her an email with info.<br>1/12/10- Heard back from Mark that they can take (for a fee) clean fill, 100 loads per day presently (1800 cu yds/day). He took my email and will be sending me more info.<br>2/23/10 - Assumed uninterested because they never got back to me and they charge for taking fill. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | Yes | **Reuse** | Yes | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | Levine-Fricke Restoration Corp. |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Jim Levine, P.E. Levine-Fricke Restoration Corp., Managing Partner, Montezuma Wetlands LLC 510-652-4500 |
| **Projects** | Montezuma Wetlands LLC |
| **Comments** | 1800 acres to use 20M cu yds dredge materials. Started 1989. Restoration, not mitigation. |
| **Contact Record** | 1/27/10 - Left message for Jim Levine.<br>2/2/10 - Left message for Jim Levine.<br>2/4/10 - Jim called back. Montezuma Wetlands LLC is permitted to take clean and somewhat contaminated materials. They can receive slurry and shunt it around with their own pumps. Can use 17 million cubic yards. Mentioned that the Hamilton restoration project has idle pumps often available. Promised to send him USACE web site on DWSC. His email is jim.levine@upstream.us.com. Need to get location off our USACE placement map. I emailed him with site: http://www.deltaltms.com/ |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | National Pipeline Mapping Service (NPMS) |
| **Organization Type** | Corporate |
| **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | |
| **Projects** | Maps of Delta Pipelines |
| **Comments** | |
| **Contact Record** | 12/18/09 - Checked web site, downloaded generalized pdf maps - has information on owners for further followup. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | Yes | **Reuse** | Yes | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | NUCP, LLC, New Urban Communities Partners |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Reed Oñate, Vice President<br>NUCP, LLC, New Urban Communities Partners, 1500 Willow Pass Court, Concord, CA 94520; Direct: 925.852.0551; Fax: 925.685.0660; Cell: 925.383.0216; Reed <reed@nucpartners.com> |
| **Projects** | |
| **Comments** | Project near E. Cypress Rd. near the terminous of Knightsen Ave., Oakley |
| **Contact Record** | 1/6/10 - Referred to me from the City of Oakley - therefore following up. 40 acres - development of 10 acres - City 30 acres. Residential, needs elevating for whole 40 acres. He is sending me a map with fill needed. ~770,000 cu yds is my estimate. Sent him link to DWSC environmental process: http://www.deltaltms.com/, which I got from Steve.<br>1/8/10 - Received map named NUCP ...pdf showing 44.9 acre parcel next to the CC Canal. Resent web link on DWSC and asked about depth of fill needed.<br>1/13/10 - Received spreadsheet with fill needs. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Pacific Gas & Electric (PG&E) |
| **Organization Type** | Corporate **Inquiry Type** Both |
| **Days, Hours, Initial Phone #s and Contacts** | Robert Day 209-942-1784. rjdr@pge.com |
| **Projects** | Transmission Tower Setbacks (height of tower?) 1100' apart. GIS of transmission lines. |
| **Comments** | Notes below give limitations - setbacks. |
| **Contact Record** | 12/17/09 Operator at 1-800-468-4743<br>12/17/09, 12/21/09, 1/6/10 Stockton area land rights and real estate Dennis Garcia 209-726-6350 no answer, (mailbox full - always); Tom Nichol 209-384-4925 called - no answer.<br>1/6/10 - Operator at 1-800-468-4743; Stockton land services, Wayne Yamasgiwa, 559-263-5152, 559-; 530-889-3131. Left message. Robert Day 209-942-1784.<br>No increase or decrease in cover over pipelines. rjdr@pge.com Requested an email to kick things off as far as them giving us guidelines. Sent email.<br>1/12/10 - PG&E Says: "A setback of 200' on either side of our facilities will be adequate to maintain the safe operation and maintenance of our gas and electric facilities along the deep water channell. t is imperative that no dredging material be laid over, beneath or adjacent to our facilities for obvious reasons, safe operation and access to the lines and pipes. The access roads to these facilities must also be kept free and clear of debris." |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | Yes | **Reuse** | Yes | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Shea Homes |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Donald A. Hofer, Vice President - Community and Land Development, Shea Homes - Northern California 2580 Shea Center Drive, Livermore, CA 94551, (925) 245-3632, referred by City of Oakley, don.hofer@sheahomes.com |
| **Projects** | Hotchkiss Island 600+ acre development. Others? |
| **Comments** | Refered to by Oakley and other entities. |
| **Contact Record** | 1/6/10 - Left message for Don Hofer. Sent an email requesting site/use information. Sent an email. Got an answer saying he is the right guy at Shea and suggesting we talk.<br>1/8/10 - Called and left message with cell #. Talked to him; he is preparing info. He should be given Corps contact info.<br>2/4/10 - Sent him info on USACE contact and asked for his info.<br>2/16/10 - Talked with Jason and sent him an email with DWSCs to jneri@cbandg.com.<br>2/23/10 - Sent another email to Jason at jneri@cbandg.com.<br>3/2/10 - He has responded with 1 map (+one from Don) for Hotchkiss Island where ~1,000,000 cu yards potential use. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |

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|---|---|
| **Organization** | SunCal |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | SunCal Companies, Irvine; SunCal Northern California Division President Bill Myers, www.SunCal.com, 300 Frank H. Ogawa Place Ste. 342, Oakland, CA 94612, T: (510) 251-0711 |
| **Projects** | Sacramento Delta Shores Land Development |
| **Comments** | In secondary zone. |
| **Contact Record** | 1/20/10 - Blake Ferris, says no needs. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | USS-Posco Industries Waste Mgmt Unit II |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Operator: 900 Loveridge Road, Pittsburg, 94565, Contra Costa, (925) 439-6000, www.uss-posco.com, along New York slough |
| **Projects** | Disposal, Solid Waste Landfill |
| **Comments** | |
| **Contact Record** | 1/6/10 - Called Tim Kismicki Reliability Manager, left message. Called back, referred me to Rod Simpson, Division Mgr, 925-439-6442 or 925-250-0025. Will likely have use for some at 900 Loveridge Road, will talk to environmental people and get back to me.<br>1/18/10 - Called back, indicated that he needs info on density, texture and quality of sediment and then he can make an estimate. I think I should send it to Rod Simpson at rsimpson@ussposco.com.<br>2/2/10- Asked Tyson of our office for descriptive materials on dredge sediments.<br>2/4/10 - got info from Tyson and emailed it to Rod.<br>2/23/10 - Sent email asking if uninterested.<br>3/2/10 - assume uninterested. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Wildlands Inc. |
| **Organization Type** | Corporate **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Kim Erickson, Wildlands, Inc., 3855 Atherton Road, Rocklin, CA 95765, p: 916.435.3555, f: 916.435.3556, kerickson@wildlandsinc.com |
| **Projects** | Holland Tract Restoration Project |
| **Comments** | Manager of the Holland Tract Restoration Project. Referred to us by John Kopchik, CCC. |
| **Contact Record** | 1/12/10 - Spoke with her briefly and sent her an email. Spoke longer and she is checking with several projects from her office. I should hear from her in a week.<br>2/2/10 - Left her a message - to call if you have found any potential uses.<br>2/3/10 - Received an email form Kim saying no needs. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Los Mendanos College | | | | | | |
| **Organization Type** | Educational Institution | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 925-439-2181 | | | | | | |
| **Projects** | | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 1/6/10 - Facilities Maintenance referred me to PB Enterprise of Concord who has done the 10-year plan for the college. Couldn't locate them. The College's Info Services, sent me to ext. 3207 Business Dept. Sent to Javon X1247 at District Office. Left message.<br>1/27/10 - No return call, assumed uninterested. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Antioch - Engineering and Development Services Division |
| **Organization Type** | Government - City |
| **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 925-779-7035 closed Friday; Public Works Karen Rios or Michelle Walker, (925) 779-6950 M-Th 7-4 |
| **Projects** | |
| **Comments** | |
| **Contact Record** | 1/6/10 - Talked with Ron Bernal - No Needs. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Antioch - Parks |
| **Organization Type** | Government - City **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 925-779-7035 closed Friday; 925-779-7070, M-F 8-5 |
| **Projects** | |
| **Comments** | (Antioch Community Park), (Antioch Municipal Reservoir), Gaylord Sports Fields |
| **Contact Record** | 1/6/10 - Al - referred me to Publlic Works' Ron Bernal 779-6820. Left message. Sand Creek basin looking to off-haul sediment out of that! No needs. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Brentwood - Community Development |
| **Organization Type** | Government - City **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | (925) 516-5400 main city, M-F 8-5; Director, **Casey McCann** (925) 516-5195 |
| **Projects** | |
| **Comments** | |
| **Contact Record** | 12/28/09 - Director, **Casey McCann** (925) 516-5195, left mess., back Jan 4.<br>12/29/09 - Called back, said checked with engineering, no uses in the city - suggested contacting D.H. Horton Discovery Bay may have a use. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Brentwood - Engineering Division | | | | | | |
| **Organization Type** | Government - City | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | (925) 516-5400 main city, M-F 8-5; 925-516-5420 | | | | | | |
| **Projects** | | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 12/28/09 - left message.<br>12/29/09 - response on their behalf by Casey McCann - no uses. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | Brentwood - Parks and Recreation |
| **Organization Type** | Government - City **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | (925) 516-5400 main city, M-F 8-5; (925) 516-5444; Craig Bronson, Director |
| **Projects** | |
| **Comments** | 12/28/09 - 516-5444; Craig Bronson, Director; left message asking him to call; back on Jan 4. |
| **Contact Record** | 1/14/10 - Called back to say no uses. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Oakley - Public Works & Engineering |
| **Organization Type** | Government - City **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | **Jason Vogan**, *Public Works Director/City Engineer, (925) 625-7003* |
| **Projects** | includes park infrastructure |
| **Comments** | |
| **Contact Record** | 12/28/09 - left mss for Jason Vogan - asked him to call, closed until Jan 4.<br>1/28/10 - assumed no projects. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Oakley, Community Development |
| **Organization Type** | Government - City **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | *Rebecca Willis,* Community Development Director, Ph. (925) 625-7000, M-F 8:30-5, |
| **Projects** | |
| **Comments** | East Cypress Corridor residential development. Specific plan at www. eastcypresscorridorspecificplan.com/. |
| **Contact Record** | 12/28/09 - left mss for Rebecca Willis - asked her to call, but said I would call back; closed until Jan 4.<br>1/6/10 - Rebecca Willis called me back, very pleasant. She says they have uses and requested an email to give her an address to respond to with details. Email sent. Projects she mentioned are Hotchkiss Tract, and Dutch Slough with DWR.<br><2/23/10 - She referred me to others; no City needs. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Pittsburg - Engineering Department | | | | | | |
| **Organization Type** | Government - City | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Joe Sabranti, City Engineer/Director of Engineering, (925) 252-4930 | | | | | | |
| **Projects** | | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 1/20/10 - Left message for Joe Sabranti. Alfredo called back: 252-4963, no uses - referred me to USS Posco. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Pittsburg - Planning Department |
| **Organization Type** | Government - City **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Dana Hoggatt, Planning Manager 925 252-4920 M-F 8-12 1-5 |
| **Projects** | |
| **Comments** | |
| **Contact Record** | 12/28/09 - Asked them to call. Dana called back to say the city has no projects needing material but said that private Tosco refinery might need some fill ... she noted that they needed permits before embarking on such a project. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Rio Vista - (Rio Vista Municipal Airport) | | | | | | |
| **Organization Type** | Government - City | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | HECTOR DELAROSA, CITY MANAGER, 707-374-6747 | | | | | | |
| **Projects** | | | | | | | |
| **Comments** | 12/28/09 - message box full!<br>1/15/10 - closed Fridays. | | | | | | |
| **Contact Record** | 1/20/10 - Dawn checked around - Greg Malcolm will call back if there is potential use. Have no place to store.<br>1/27/10 - No return call, assumed uninterested. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | Yes | **Reuse** | Yes | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Rio Vista - Community Development |
| **Organization Type** | Government - City **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Emi Theriault, Acting Director, (707) 374-6451 appear to be closed on Fridays. emi.theriault@ci.rio-vista.ca.us |
| **Projects** | Shoreline erosion replacement and levee repair. |
| **Comments** | |
| **Contact Record** | 12/28/09 - closed until Jan 4, left message to call me.<br>1/15/10 - closed Friday.<br>2/2/10 - expressed considerable interest. Out the rest of this week but will set up conference call with city engineers because they have some shoreline erosion sites.<br>2/23/10 - left phone message.<br>3/2/10 - no returned call, assumed uninterested.<br>3/24/10 - got a call from Emi who wants to meet about their needs. Sent her an email requesting more info. Putting her in touch with Steve Michelson for technical details.<br>4/19/10 - got a map.<br>5/10/10 - talked, she promised volumes. Putting her in touch with Steve Michelson.<br>5/17/10 - finally got numbers. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Stockton - Municipal Utilities | | | | | | |
| **Organization Type** | Government - City | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 209-937-8750 | | | | | | |
| **Projects** | | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 1/20/10 - Levee work - Mike Callahan 209-937-8994. Would like a corps contact RD 2029 Empire Tract, Stockton DWSC and Diappointment Slough, water intake 80K fill needs it soon. michael.callahan@ci.stockton.ca.us. Needs Corps contact for fill now.<br>2/4/10 - Sent info to Mike, also about ERS with copy to Steve Michelson. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |
| **Organization** | West Sacramento - Community Development | | | | | | |
| **Organization Type** | Government - City | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Charline Hamilton, Development Services, Manager 916-617-4500 M-F 8-12, 1-4 | | | | | | |
| **Projects** | | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 12/28/09 - left msg. for Charline. Closed until Jan 4.<br>1/6/09 - Got a call back from Tom Shuller (sp?) of the Port of West Sacramento. He said the City of West Sacramento and the Port have no planned uses. But he added that he is intimately involved with he dredging and particularly up-channel material disposal. He sees a continuous need for backstopping levees or setback levees but can't point to a specific need at the moment. Charlene conveyed no need. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |
| **Organization** | West Sacramento Levee Improvements Program | | | | | | |
| **Organization Type** | Government - City | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | None necessary. | | | | | | |
| **Projects** | Improve 50 miles of levees to achieve 200-ear flood protection _ recreational elements. | | | | | | |
| **Comments** | Already Completed!!! | | | | | | |
| **Contact Record** | | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Contra Costa County - CCC Flood Control and Water Conservation District |
| **Organization Type** | Government - County **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Greg Connaughton, Assistant Public Works Director, (925) 313-2000 |
| **Projects** | |
| **Comments** | Manages detention basins at Discovery Bay, Sand Creek, East Antioch, and Marsh Creek Reservoir. |
| **Contact Record** | 1/6/10 - Talked to Mitch Avalon who indicated county does not need fill, usually trying to get rid of it. Expansion of Marsh Creek Reservoir capacity would involve removing sediments, not enlarging dam. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Contra Costa County - Community Development Department | | | | | | |
| **Organization Type** | Government - County | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | John Kopchik 925-335-1227 | | | | | | |
| **Projects** | E. CCC Habitat Conservancy | | | | | | |
| **Comments** | E. CCC Habitat Conservancy was created from the ECCC HCP/NCCP and should have some restoration uses. | | | | | | |
| **Contact Record** | 1/6/10 - Called and left a message for both the ECCC habitat Conservancy and the CCC Community Development Department. He called back - no use. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Contra Costa County - Department of Conservation and Development | | | | | | |
| **Organization Type** | Government - County | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Catherine O. Kutsuris, DCD Director, M-F 7:30-5, (925) 335-1290 | | | | | | |
| **Projects** | | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 1/15/10 - Talked to Catherine's secretary - took message and suggested: Call the Application Permit Center 925-335-1380 - planning -- try 925-335-1381. Call back.<br>2/2/10 - Referred to grading section, Gary Feria, left message - call if interested.<br>2/23/10 - no call, assumed no interest. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Contra Costa County - Public Works | | | | | | |
| **Organization Type** | Government - County | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Mitch Avalon, Deputy Director, 925-313-2203 | | | | | | |
| **Projects** | | | | | | | |
| **Comments** | Also oversees CCCFCWCD | | | | | | |
| **Contact Record** | 1/6/10 - Mitch says no needs in the foreseeable future; generally trying to get rid of materials. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Sacramento County - Municipal Services Agency - Department of Transportation, | | | | | | |
| **Organization Type** | Government - County | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Chief, Dan Shoeman 916-874-6291 | | | | | | |
| **Projects** | | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 1/15/10 - Left phone message.<br>2/23/10 - No response - assume uninterested. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Sacramento County - Municipal Services Agency - Planning and Community |
| **Organization Type** | Government - County **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 916-874-6141; 916-874-6409 direct |
| **Projects** | |
| **Comments** | Protected Easement (SSHCPConservation sites map.pdf), Gilsier Sough Preserve, City of Elk Grove Agricultural Easement, (unlabeled unit on Hwy 220 Yolo Co). See map for additional units.<br>Protected Fee Title: Tyler Island Habitat LLC - Delta Meadows |
| **Contact Record** | 1/15/10 - Christopher Castorena - on leave until 1/19/10; left message asking about Williamson Act allowable uses, and other preserves; also about county projects that may use materials.<br>~1/22/10 -He got back to me, no conflict with Williamson Act. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |
| **Organization** | Sacramento County - Planning & Public Works | | | | | | |
| **Organization Type** | Government - County | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Director: John Bencomo (530) 666-8775, M-F 9-12, 1-3 | | | | | | |
| **Projects** | | | | | | | |
| **Comments** | Washington Lake | | | | | | |
| **Contact Record** | 1/6/10 - David Morrison Assistant Director, couldn't think of any projects but will check with engineers and get back to me later this week.<br>1/27/10 - No return call, assumed uninterested. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | San Joaquin County - Community Development Planning Division | | | | | | |
| **Organization Type** | Government - County | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | (209) 468-3160 M-F 8-5 | | | | | | |
| **Projects** | Williamson Act | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 1/12/10 - Called John ___ to find out about Williamson Act contact use constraints.<br>1/15/10 - Left Message asking him to call back. He called back - nothing incompatible with the Williamson Act. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | San Joaquin County - Parks |
| **Organization Type** | Government - County **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | (209) 953-8800 M-F 8-5 |
| **Projects** | |
| **Comments** | Boggs Tract Park, Dos Reis County Park, Larch Clover Park, Madison Park, Mandeville Tip County Park?, Mossdale County Park, Oak Grove Regional Park |
| **Contact Record** | 1/6/10 - Planning and Development, Jeff Smith, Park Planning Coordinator, 209-953-3520. Left Message. In Tu, Th? 8-12.<br>1/12/10 - He called back (works part time) Suggested talking to Greg Jordan, RD 17 concerning Mossdale Park at 925-225-0690. Need to check with Steve.<br>1/27/10 - Greg said call Chris Gunther 225-0690 - they may need some for the boat ramp.<br>2/2/10 - Left message for Chris indicating that if he doesn't call back, I assume no use.<br>2/23/10 - No response, assume no needs. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | San Joaquin County Agricultural Commissioner |
| **Organization Type** | Government - County **Inquiry Type** Both |
| **Days, Hours, Initial Phone #s and Contacts** | Scott Hudson, Agr. Comm., (209) 953-6000, http://www.co.san-joaquin.ca.us/agcomm/. 2101 East Earhart, Stockton, 8-5. |
| **Projects** | Farm Field Mapping |
| **Comments** | Uses, and land values. Other places. |

**Contact Record**

12/21/09 Call old number - disconnected!
1/6/10 - New # found and works. Pestcide permit database yield a map. Farm field units. Sent email to shudson@sjgov.org requesting GIS layer for crops (plus index).
1/8/10- Furdi contacted me from their GIS unit and he is emailing order form. Need to give USACE contact. He noted that the crops rarely change from year to year - he is giving us the 2009 data; 2010 ready in July or so.
1/11/10 - Faxed back order form -- they will not charge us.
1/27/10 - Re-faxed, didn't get the original. Says they can provide many years of data if needed. He sent us the data - checks out well.

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | San Joaquin County Channel Maintenance |
| **Organization Type** | Government - County **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Butch Waddle - 209-468-9698 lwaddle@sjgov.org |
| **Projects** | Used for erosion repair. |
| **Comments** | |
| **Contact Record** | 1/20/10 - Have 2 placement sites: east side of Stockton at diverting canal at main street; also in Farmington. Can take materials will send map and quantities by email.<br>2/23/10 - Sent reminder by email.<br>3/2/10 - assume uninterested.<br>3/9/10 - got call back.<br>3/10/10 - returned call. He does not have a placement site but is very interested in free material (only kind the County can use) in vicinity of Stockton. Please keep in mind but nothing to map. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | Yes | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Solano County - Engineering, Road Department |
| **Organization Type** | Government - County **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Paul Wiese, 707-784-6072 |
| **Projects** | Roads. |
| **Comments** | No projects planned at the moment but there are intermittent needs. |
| **Contact Record** | 1/15/10 - Talked to Paul, he says put their corporation yard as a site on the map for small-medium use. No number value provided. Corporation yard address: 3255 North Texas St., Fairfield. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Solano County - Parks | | | | | | |
| **Organization Type** | Government - County | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 707-784-3118 | | | | | | |
| **Projects** | Parks | | | | | | |
| **Comments** | Sandy Beach Park (in Rio Vista, USACE Land) | | | | | | |
| **Contact Record** | 1/15/10 - Dan Sykes - Riprap project might need a little placement fill but generally no thanks. Very helpful person. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Solano County Water Agency |
| **Organization Type** | Government - County **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | David B. Okita, PE, General Manager, (707) 455-1103 |
| **Projects** | North Bay Aqueduct, other uses |
| **Comments** | Large portion (NE county) inside our study area including Barker Slough pumping station for the North Bay Aqueduct (perated by DWR Delta Field Division near Tracy). HCP done by Vollmar Consulting. |
| **Contact Record** | 1/15/10 - Talked to David - says no uses. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Solano County, Division of Architectural Services |
| **Organization Type** | Government - County **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Fred Denes - 707-784-7909, fdenes@solanocounty.com |
| **Projects** | Parks and other capital improvements |
| **Comments** | |
| **Contact Record** | 1/15/10 - Fred<br>Parking lot and 12K square foot footprint Vacaville. Use corporation yard on N. Texas. Needs USACE contact. He will send more info. Sent him an email.<br>2/4/10 - Sent Fred info on USACE and asked for location.<br>2/23/10 - Sent email asking if any further potential use info. Responded that he is following through - I can expect to hear in 1-2 weeks.<br>3/10/10 - Heard nothing, assumed uninterested. It is far outside the study area anyway,<br>3/23/10 - Got message; still interested.<br>3/24/10 - Left him a voice mail.<br>5/10/10 - Nothing further, assumed disinterested. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | Yes | **Reuse** | Yes | **Relevant Unit** | Sacramento |

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|---|---|
| **Organization** | Yolo County Central Landfill |
| **Organization Type** | Government - County **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Operator: County of Yolo Public Works Dept, County Road 28h & County Road 104, Davis, 95616, Yolo, (916) 375-6485, www.yolocounty.org |
| **Projects** | Composting, Composting Facility (Green Waste); Disposal, Solid Waste Landfill; Composting, Chipping and Grinding Activity Fac / Op |
| **Comments** | |
| **Contact Record** | 1/8/10 - talked to Linda Sinderson - Integrated Waste Management, needs soil for cover, millions of cubic yards over the next 80 years! I sent her an email for the schedule. She was intrigued by the idea of piping the sediment there. Also sent her a map, Yolo County Central Landfill to confirm.<br>1/11/10 - email from Linda, described the project area more precisely and promised schedule soon.<br>1/26/10 - Received email with information on volumes. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Bureau of Land Management | | | | | | |
| **Organization Type** | Government - Federal | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 13501 Franklin Blvd., Galt, CA 95632, (916) 684-2816, info@cosumnes.org, fax (916) 683-1702 | | | | | | |
| **Projects** | Consumnes River Preserve | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 1/15/10 - Harry McQuillen, preserve manager BLM, 916-683-1701 office; 916-838-8475 cell. Left message on office phone; works Mon-Thu.<br>1/21/10 - Harry returned call; missed him tried back unsuccessfully.<br>2/2/10 - Brent manages Staten Island. Anyway, Harry will spread the word and my contact information tomorrow.<br>2/23/10 - No contact - assume no need. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |
| **Organization** | Natural Resources Conservation Service - Yolo | | | | | | |
| **Organization Type** | Government - Federal | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Woodland Service Center, (530) 662-2037 | | | | | | |
| **Projects** | Land Management, Farm Service Agency, NRCS, RCD | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 1/15/10 - Wendy Rash #113 NRCS. Left message.<br>1/19/10 - Spoke to Wendy, said no projects by she would ask around the office and get back to me in a couple of days IF there was a potential use.<br>2/23/10 - Assumed no use. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Resource Conservation Districts - Contra Costa | | | | | | |
| **Organization Type** | Government - Federal | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | USDA Concord Service Center, 925-672-4577 | | | | | | |
| **Projects** | Land Management, NRCS, RCD | | | | | | |
| **Comments** | Farm Service Agency uses Stockton office. | | | | | | |
| **Contact Record** | 1/15/10 - RCD - no project uses. Suggested talk with Allison ext.102 with NRCS - left message to please call.<br>1/20/10 - tried again. No needs. Send email with our contact info plus promised a corps contact alyson.aquino@ca.usda.gov<br>2/4/10 - I sent an email with contact info.<br>2/22/10 - Assumed no need. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |

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| **Organization** | US Army Corps of Engineers - Sacramento |
| **Organization Type** | Government - Federal **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Rachael 916-557-7009 - levee management. |
| **Projects** | Levees and Cache Creek Settling Basin |
| **Comments** | Referred to me by Marty Eisenmann of the Engineering Division 916-557-7125. |
| **Contact Record** | 2/2/10 - Left her a message asking if future levee elevation enhancement of the Cache Creek Settling Basin would use dredge materials or settled materials from within the basin.<br>2/23/10 - Left a message.<br>3/10/10 - Assumed they will use materials from withiin the basin to elevate the levees. No response. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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| **Organization** | US Bureau of Reclamation - SCCAO, South-Central California Area Office |
| **Organization Type** | Government - Federal **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 559-487-5116, Michael Jackson, Area Manager, 1243 "N" Street, Fresno CA 93721-1813 |
| **Projects** | Contra Loma Reservoir Expansion and 2 Dikes |
| **Comments** | |
| **Contact Record** | 1/15/10 - Has no voice mail. Tried to reach him - in meeting.<br>1/20/10 - Not available today.<br>1/27/10 - Called - busy. pescobar@usbr.gov Pam<br>1/28/10 - Pam? took initiative with conveying message to Michael.<br>2/23/10 - No need is assumed. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | Yes | **Reuse** | Yes | **Relevant Unit** | Sacramento |

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|---|---|
| **Organization** | US Fish and Wildlife Service |
| **Organization Type** | Government - Federal **Inquiry Type** Both |
| **Days, Hours, Initial Phone #s and Contacts** | Lori Rinek, Sacramento Fish and Wildlife Office, 2800 Cottage Way, W-2605, Sacramento, CA 95825, e-mail to lori_rinek@fws.gov, or fax to (916) 414-6713, phone 916-414-6464 Section 10 Biologist 916-930-5638. Brian Hansen called back 916-930 -5644.<br><br>http://www.fws.gov/sfbaydelta/ is the Bay-Delta F&W Offuce |
| **Projects** | Bay Delta Conservation Plan for the Sacramento-San Joaquin Delta, CA; Shin Kee Tract |
| **Comments** | |
| **Contact Record** | 1/19/10 - Called Lori Rinek, Section 10 Biologist, 916-930-5638 and left mess.<br>1/27/10 - tried unsuccessfully to reach her.<br>2/2/10 - Left Lori a message to call.<br>2/16/10 - Left another message and sent an email.<br>2/22/10 - Sent another message.<br>3/10/10 - Decided she was uninterested.<br>~3/17/10 - Contacted by Brian Hansen, USFWS who indicated that they will need dredge materials for Shin Kee Tract although the amount is unknown. Brian indicated that we could use the CNDDB to locate sitings of listed species (there are some 60 involved in the Delta) from the last couple of years ... this would define one set of protected areas but also indicated that some areas occupied in the past ... also on CNDDB would still be actual or potential habitat. On the other hand he fully endorsed putting off the listed species/habitat constraints issues until each particular site was under review - things change and USFWS and DFG would require that anyway. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | US Fish and Wildlife Service |
| **Organization Type** | Government - Federal **Inquiry Type** Both |
| **Days, Hours, Initial Phone #s and Contacts** | Marge Kolar, Regional Chief, National Wildlife Refuge System, Tel. 916-414-6476<br>Fax: 916-414-6486 |
| **Projects** | |
| **Comments** | Antioch Dunes, Stone Lakes covered in other records. |
| **Contact Record** | 1/19/10 - Left Marge a message about possible use of sediments in NWRs. Called back to say I should contact: Antioch Dunes Manager Christy Smith 707-769-4200 ext 100 - called and left her a message to call if interested; Stone Lakes Manager Bart McDermitt 916-775-4421 - no answer. **See other records for these units.** |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | Yes | **Relevant Unit** | Both |

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|---|---|
| **Organization** | US Fish and Wildlife Service |
| **Organization Type** | Government - Federal **Inquiry Type** Both |
| **Days, Hours, Initial Phone #s and Contacts** | Antioch Dunes Manager Christy Smith 707-769-4200 ext 100 |
| **Projects** | Antioch Dunes National Wildlife Refuge |
| **Comments** | |
| **Contact Record** | 1/19/10 - Called and left her a message to call if interested.<br>1/22/10 - Christy Smith said they need clean sandy materials. She will send maps of Antioch Dunes (a pit in need of sand to make dunes - buy 80,000 cu yards per year).<br>2/23/10 - She is out this week but I left voicemail asking her to get info to me.<br>3/2/10 - Assume it is a potential reuse site.<br>3/9/10 - Chrsity called to say they are re-evaluating how they manage site ... might be interested sometime in the future. Was happy to be put on our map. We assigned 1 M CY clean sand representing several years. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | US Fish and Wildlife Service |
| **Organization Type** | Government - Federal **Inquiry Type** Both |
| **Days, Hours, Initial Phone #s and Contacts** | Stone Lakes Manager Bart McDermitt 916-775-4421 |
| **Projects** | Stone Lakes National Wildlife Refuge |
| **Comments** | |
| **Contact Record** | 1/19/10 - Called and no answer.<br>1/22/10 - No answer.<br>2/17/10 - left message - let me know if interested.<br>2/23/10 - Did not get back to me, assumed uninterested. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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| **Organization** | BART |
| **Organization Type** | Government - Special District **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | M-F 8:30-5 510-464-7134 |
| **Projects** | eBART extension, Pittsburg to Antioch, (and Antioch to Tracy - not anticipated, cannot get right of way) |
| **Comments** | BART operator could not find phone number contact for Amie Eng |
| **Contact Record** | 12/21/09 - Sent email to Amie Eng, ang@BART.gov<br>Ellen Smith in Planning Group 510-287-4758<br>1/15/10 - Ellen Smith (VERY HELPFUL) in Planning Group 510-287-4758<br>Civil work on BART extension being done by Caltrans - |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Bay Conservation and Development Commisssion (BCDC) |
| **Organization Type** | Government - Special District **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Referred by Mitch Avalon, CCC: BCDC Jessica Hamburger 415-352-3660 works with Regional Sediment Management Plan - LTMS - Brian Ross (EPA); Dredged Material Management Office |
| **Projects** | Regional Sediment Management Plan - LTMS |
| **Comments** | Really concerned only with the Bay below Pittsburg but always ready to cooperate, involved with Long Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region (LTMS). Contact Jessica if we work in the Bay per se. |
| **Contact Record** | 1/6/10 - Spoke with Jessica. No needs, outside their jurisdiction. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Contra Costa County Water Agency |
| **Organization Type** | Government - Special District **Inquiry Type** Both |
| **Days, Hours, Initial Phone #s and Contacts** | Roberta Goulart, 651 Pine Street, 4th floor, N wing, Martinez, CA 94553, tel (925) 335-1226, fax (925) 335-1299, e-mail: rgoul@cd.cccounty.us |
| **Projects** | San Francisco - Stockton Deep Water Ship Channel Deepening Project |
| **Comments** | |
| **Contact Record** | 1/20/10 - Left message asking for additional groups to contact.<br>1/25/10 - she called. I called back.<br>1/26/10 - I emailed in accord with her email received today. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | Contra Costa Transportation Authority |
| **Organization Type** | Government - Special District **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Manager, Susan Miller 925-256-4736 manages freeway widening Pittsburg to Antioch Bridge |
| **Projects** | eBART extension and Freeway Expansion |
| **Comments** | |
| **Contact Record** | 1/15/10 - Left a message asking for call back to discuss BART extension and who I should contact at Caltrans. Excess dirt. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | Yes | **Reuse** | Yes | **Relevant Unit** | Both |
| **Organization** | Contra Costa Water District | | | | | | |
| **Organization Type** | Government - Special District | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Chris Hentz, chentz@ccwater.com | | | | | | |
| **Projects** | Contra Costa Canal | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 12/18/09 - Steve Michelson and Dan Holmes spoke with Chris and he indicated a need for filing the Contra Costa Canal from Rock Slough to 1st, 4 miles but 2000' already done. Canal to be partly filled with existing berm materials.<br>12/21/09 - Dan sent an email requesting a map of reuse site(s) and an estimate of the quantity to be used.<br>1/8/10 - Resent email as a reminder.<br>1/11/09 - Responded thanking me for reminding him.<br>2/2/10 - Sent another reminder.<br>2/4/10 - Got response, see files in Map and Memo fields. | | | | | | |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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| **Organization** | East Bay Municipal Utility District (EBMUD) |
| **Organization Type** | Government - Special District **Inquiry Type** Both |
| **Days, Hours, Initial Phone #s and Contacts** | 6:30 a.m. to 5:30 p.m., 866-403-2683, http://www.ebmud.com, aenos@ebmud.com. |
| **Projects** | Mokelumne Aqueduct and protecting levees. |
| **Comments** | Downloaded map of Mokelumne Aqueduct ... need better, ask for GIS file.<br>Ask about setbacks. |
| **Contact Record** | 1/6/10 - Engineering Dept., Jonathan Tam; No Projects - but referred me to aqueduct section: Reached Andrew Andy Enos via operator. Since Delta Vision provided us with a good Mokelumne Aqueduct GIS file we don't need one from EBMUD. Tom Roston engineers, for five reclamation districts, handles all their levee reinforcement needs... the aqueduct is above ground except where it goes under channels. Easement - setback - need to ask. 3 pipes? aenos@ebmud.com.<br>1/8/10 - Sent Andy a email asking about the 3 pipes and the easement width for the aqueduct.<br>~1/13/10 - Contacted him and settled on setback ... see memo above. No fill needed. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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|---|---|
| **Organization** | East Bay Regional Park District |
| **Organization Type** | Government - Special District **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | M-F 8:30-5, 1-888-327-2757 -0- |
| **Projects** | Regional Parks |
| **Comments** | Big Break, Browns Island Regional Shoreline (no access preserve), (Contra Loma Regional Park), Delta Landbank. |
| **Contact Record** | 1/15/10 - Brian Weise, supervisor of planning. Left message.<br>1/27/10 - left another message. Brian called back and referred me to: Mike Anderson, Assist Gen'l Mgr. 510-544-2303; Diane Altoff Chief Design and Construction 510-544 -2304; I left message with Diane.<br>2/2/10 - Spoke to Mike - he said no use in time frame. Left message for Diane. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

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| **Organization** | East Contra Costa County Habitat Conservancy |
| **Organization Type** | Government - Special District **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 925-335-1290 , John Kopchik 925-335-1227 |
| **Projects** | East Contra Costa County HCP/NCCP Preserve System |
| **Comments** | Habitat for tricolored blackbird, western burrowing owl, Swainson's hawk, and giant garter snake. wetlands, riparian. Current status Zone 6, cultivated agriculture. |
| **Contact Record** | 1/6/10 - Contacted John Kopchit, CCC Community Development left message.<br>1/11/10 - Talked to John, gave me several connections including Wildlands, Caltrans, DWR. No needs. |

# USACE DREDGING CONTACT LIST

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|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |

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|---|---|
| **Organization** | FLOODsafe |
| **Organization Type** | Government - Special District **Inquiry Type** Both |
| **Days, Hours, Initial Phone #s and Contacts** | Fran Borcalli (fborcalli@woodrodgers.com)916-919-7993 cell, 916-599-3622 cell, 916-341-7760 office, 916-326-5224. |
| **Projects** | |
| **Comments** | |
| **Contact Record** | 1/20/10 - Called Fran at 2nd cell # above and left a message including a request for contact on the Cache Creek Settling Basin. No ansswer, found alternative source for info. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | Yes | **Reuse** | Yes | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | State Route 4 Bypass Authority |
| **Organization Type** | Government - Special District **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Dale Dennis, State Route 4 Bypass Authority 925-686-0619. Contact is Nancy C Wein, Staff/Senior Civil Engineer, State Route 4 Bypass Authority, East Contra Costa Regional Fee and Financing Authority, 255 Glacier Drive, Martinez, CA 94553, 925.313.2275 |
| **Projects** | State Route 4 Bypass Oakley to Brentwood |
| **Comments** | |
| **Contact Record** | 1/12/10 - Left a message.<br>1/15/10 - Left a message.<br>1/20/10 - Nancy Wein - returned call. 313-2275 and left mess. I then called her and left message.<br>1/22/10 - Nancy Wein - returned call. 313-2275 and left mess. I then called her and left message.<br>1/26/10 - Nancy Wein, exchanged messages again.<br>1/27/10 - Nancy Wein, I left her a message.<br>2/2/10 - Left message for Nancy.<br>2/10/10 - Left message.<br>2/16/10 - Left message.<br>2/23/10 - Left final message. She reached me! She is sending information tomorrow.<br>2/23/10 - She sent map and "We need approximately 150,000 CY for the 4-lane widening project and 350,000 CY for the Sand Creek IC (interchange) project." |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | California Department of Fish and Game |
| **Organization Type** | Government - State **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 707-944-5500 delta; 209-948-7708 Bay Delta Region. Tu-Th 9:30-3:30. |
| **Projects** | Wildlife Areas |
| **Comments** | Decker Island Wildlife Area, Lower Sherman Island WA, Miner Slough WA, Point Edith WA, Rhode Island WA, White Slough WA, Yolo Bypass WA, Woodbridge Ecological Preserve (AKA Isenberg Crane Reserve) |
| **Contact Record** | 1/15/10 - sent email to CraneTours@dfg.ca.gov; Catherine Kellog Campbell.<br>2/2/10 - called main office - wildlife management - left detailed message.<br>2/3/10 - contacted by Karen who referred me to Dave Felize for whom I left a message.<br>2/4/10 - Got response, none of CDFG sites need materials. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | N/A | **Reuse** | N/A | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | California Department of Fish and Game |
| **Organization Type** | Government - State **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 707-944-5500 delta; 209-948-7708 Bay Delta Region. Tu-Th 9:30-3:30. Referred to Eric Larson, Supervising Biologist with Bay Delta Region. He is contactable directly at (707) 944-5528 or ELarson@dfg.ca.gov. Referred by David W. Moore, Interpretive Services Supervisor, Bay Delta Region, P. O. Box 47 Yountville, CA 94599, (707) 766 -8380 cell: (707) 761-1369, email: dmoore@dfg.ca.gov |
| **Projects** | Protected habitat |
| **Comments** | |
| **Contact Record** | 2/16/10 - Left phone and email messages for Eric Larson, ELarson@dfg.ca.gov, asking for a map of protected habitat this week.<br>2/23/10 _ Sent memo again by email.<br>~2/26/10 - Got phone message responses; so we used habitat maps off DFG web site. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | California Parks and Recreation |
| **Organization Type** | Government - State **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 800-777-0369, 916-653-6995 |
| **Projects** | State Parks |
| **Comments** | Brannan Island State Recreation Area, Caswell Memorial State Park, Durham Ferry State Recreation Area, Franks Tract State Recreation Area |
| **Contact Record** | 1/6/10 - Northern Service Center 916-445-8870 - Ron Birkhead (from Bill) 916-445-8760; cell 916-284-9648 said call Tues or Wed.on cell.<br>~1/14/10 - no uses reported. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | California State Lands Commission |
| **Organization Type** | Government - State **Inquiry Type** Both |
| **Days, Hours, Initial Phone #s and Contacts** | Paul Thayer, Executive officer, 916-574-1800 |
| **Projects** | Landowner |
| **Comments** | |
| **Contact Record** | 1/15/10 - Left message.<br>1/27/10 - Called and referred to Don Oedsel in Land Management. Left him a message.<br>1/28/10 - He called to say that most of their lands are under water and they have no use for dredge materials. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | CalTrans - District 10 - San Joaquin |
| **Organization Type** | Government - State |
| **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Caltrans<br>1976 East Charter Way / East Dr. Martin Luther King Jr. Blvd.<br>Stockton, CA 95205<br>Public Information Office: 209-948-7543<br>District Director - Ross Chittenden |
| **Projects** | All highway projects. |
| **Comments** | CalTrans files for state: ftp://svctftp.dot.ca.gov. Being handled by Bruce Blogett. |
| **Contact Record** | Contact made through Bruce De Terra, District 3. Indicated that District 10 is uninterested: Concerns with potential utility for construction and any possible hazardous materials were key reasons for the lack of interest. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | CalTrans - District 3 - Sacramento and Yolo |
| **Organization Type** | Government - State |
| **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Caltrans<br>703 B Street, P.O. Box 911<br>Marysville, CA 95901<br>(530) 741-4204<br>Jeff Pulverman, Division Chief 530-741-4337<br>Bruce De Terra (acting until 2/16) 916-274-0614<br>bruce_de_terra@dot.ca.gov |
| **Projects** | All projects. |
| **Comments** | Concerns with potential utility for construction and any possible hazardous materials were key reasons for the lack of interest. |
| **Contact Record** | 2/10/10 - Talked to Bruce - he will contact all three districts (3, 4, and 10) and find out what they need! Sent him an email with information on dredge materials.<br>2/24/10 - Sent him an email asking how is it going. Responded District 3 uninterested: Concerns with potential utility for construction and any possible hazardous materials were key reasons for the lack of interest. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | Caltrans - District 4 - Solano and Contra Costa counties |
| **Organization Type** | Government - State **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Head Design Caltrans person: Helena (Lenka) Culik-Caro District 4, 510-286-4444 -6- -*0- 510-286-5905 |
| **Projects** | |
| **Comments** | |
| **Contact Record** | 1/15/10 - Tried, closed for furlough.<br>1/20/10 - tried, no answer.<br>2/2/10 - tried, no answer.<br>2/10/10 - Left message for Lenka - taken in person<br>2/16/10 - Spoke to Lenka - she will get back to me.<br>2/24/10 - Email from Bruce De Terra from District 3 is also getting me a contact.<br>3/4/10 - got contact, forwarded to Steve Michelson:<br>Dragomir Bogdanic, MS., PE. Branch Chief Division of Construction Office of Environmental Engineering Support Caltrans District 4 Office: (510) 622-0716 Cell: (510) 867-6007.<br>3/10/10 - We are still working on this one.<br>5/10/10 - Left him a phone message with my number.<br>5/17/10 - No return call - assume uninterested. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | Coastal Conservancy |
| **Organization Type** | Government - State **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Deputy Director- Nadine Hitchcock, 510-286-4176<br>Bay Program Manager - Amy Hudsell 510-286-4180<br>Dutch Slough restoration, Jeff Melby 510-286-4088 |
| **Projects** | Dutch Slough - covered by DWR Patty Quickert. |
| **Comments** | 2008 - provided $100,000 to the Delta Protection Commission to develop the first phase of the Great California Delta Trail Plan Bay Program Manager - Amie Hudsell 510-286 -4180. Envisioned is a hiking and biking trail through the shoreline areas of Contra Costa and Solano counties that would link the San Francisco Bay Trail to planned Sacramento River trails. (September). |
| **Contact Record** | 1/20/10 - Talked to Nadine. She commented on sediment needs for Hamilton Field and numerous other Bay projects. If we expand this project into the Bay, she should be contacted. Suggested I talk to Amy Hudsell of her office about Delta.<br>2/2/10 - Talked to Amy - said Dutch Slough is about the only place and that is covered. Left courtesy message for Jeff Melby.<br>2/23/10 - No response, assume no need. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | Delta Protection Commission |
| **Organization Type** | Government - State **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | DELTA PROTECTION COMMISSION, 14215 River Road, Walnut Grove 95690,P.O. Box 530, Walnut Grove 95690, http://www.delta.ca.gov, Information 916-776-2290, FAX 916-776-2293, Executive Director-Linda Fiack, 916-776-2290 |
| **Projects** | Great California Delta Trail Plan, Delta Working Landscapes - Ducks Unlimited (Jeff Hart - Hart Restoration) Lower Yolo Bypass |
| **Comments** | The mission of the Delta Protection Commission is to adaptively protect, maintain, and where possible, enhance and restore the overall quality of the Delta environment consistent with the Delta Protection Act, and the Land Use and Resource Management Plan for the Primary Zone. This includes, but is not limited to, agriculture, wildlife habitat, and recreational activities. The goal of the Commission is to ensure orderly, balanced conservation and development of Delta land resources and improved flood protection. State agency to Received 2008 grant from Coastal Commission to start. |
| **Contact Record** | 1/20/10 - Left message at Fiack number asking them to please call.<br>1/22/10 - Linda called - she returned call cell is 916-203-6883; linda.fiack@delta.ca.gov; I returned call - no contact yet. Very supportive of reuse. She will respond to my email I just sent with information and contacts. She will also notify her Commission members representing land owners and counties.<br>2/4/10 - no word, assume no use. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | Yes | **Reuse** | Yes | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | Department of Water Resources |
| **Organization Type** | Government - State **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Patty Quickert (referred by Chris Hentz CCWD and by Rebecca Willis, City of Oakley. Patty Quickert, DWR Delta-Suisun Marsh Office, 1416 9th Street Room 1623, Sacramento, CA 95814, (916) 651-0851, pattyq@water.ca.gov |
| **Projects** | Dutch Slough Tidal Restoration Project |
| **Comments** | See documents at www.dutchslough.org/homepage.html. Natural Heritage Institute involved. Department of Water Resources owns the 1,166-acre land known as Dutch Slough Tidal Wetlands Restoration Project. They have already released a Draft EIR for the project, which includes plans for a significant amount of fill. |
| **Contact Record** | 1/21/10 - Called back, very interested. Sent her an email and she will send back map with annotations. Mentioned RD 2137 as relevant. 300K to 1.3M cu yds.<br>1/25/10 - She sent site maps. I emailed back thanking her and asking for volumes. She responded: Our current volume estimate is 500,000 (Burroughs) to 1,000,000 (remainder) cubic yards. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | Yes | **Reuse** | Yes | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | DWR - Bay Delta Conservation Plan (BDCP) |
| **Organization Type** | Government - State **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Spaar, Stephani (916) sspaar@water.ca.gov<br>http://baydeltaconservationplan.com/default.aspx<br>BDCP, To request additional information about the BDCP, please contact Karla Nemeth by email at karla.nemeth@resources.ca.gov or by phone at (916) 651-7587. |
| **Projects** | Wetland creation. |
| **Comments** | Goal of creating 65,000 acres of wetland, along Yolo Bypass especially. The plan will identify a set of water flow and habitat restoration actions to contribute to the recovery of endangered and sensitive species and their habitats in California's Sacramento-San Joaquin Delta. Lead agencies for the EIR/EIS are the California Department of Water Resources, the Bureau of Reclamation, the U.S. Fish and Wildlife Service, and NOAA's National Marine Fisheries Service, in cooperation with the California Department of Fish and Game, the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers.<br><br>The Delta Habitat Conservation and Conveyance Program (DHCCP) was formed in 2008 to assess potential habitat restoration and water conveyance options in the Delta. The DHCCP is a partnership between the California Department of Water Resources and the Bureau of Reclamation to evaluate the ecosystem restoration and water conveyance alternatives identified by the BDCP. DHCCP activities include an environmental review of the BDCP. The DHCCP will advance the preferred alternative for water conveyance facilities and habitat restoration. |
| **Contact Record** | 2/17/10 - Talked with Karla - she referred me to Stephani Spaar. Sent her an email.<br>2/23/10 - Resent email labeled "URGENT". Got response saying no estimates yet. I thanked her. We just plotted up the areas as potential placement/reuse sites. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | DWR - Levee Evaluation Program |
| **Organization Type** | Government - State **Inquiry Type** Both |
| **Days, Hours, Initial Phone #s and Contacts** | leveerepair@water.ca.gov; Possible leads from Stefan Lorenzato (DWR): Delta Levees Program: Jay Chamberlain (jtchambe@water.ca)916-651-9678; Sacramento River bank Protection Program Annual Inspection: Mike Inamine (inamine@water.ca) 916-653 -2952; Deborah Condon (dcondon@water.ca) 916-574-1479; |
| **Projects** | Levee Repair and Maintenance; Annual Inspections |
| **Comments** | Has potential to provide a lot of levee reuse information. |
| **Contact Record** | 12/24/09 - Sent email to leveerepair@water.ca.gov requesting contact name, and Delta GIS files of Levee Flood Protection Zones which show flooding depth potential. Also asked about GIS files about the conditions/dimensions of the levees. Have paper maps and flier on Levee Analysis Methods.<br>1/27/10 - No answer to my inquiry.<br>3/2/10 - I dropped them, assumed covered elsewhere. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |

| | |
|---|---|
| **Organization** | Ducks Unlimited |
| **Organization Type** | NGO **Inquiry Type** Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Hours 7-4. Steve Carroll. Referred by Christy Smith of Antioch Dunes. Jeff Hart and Jeff McCreary of Ducks Unlimited. |
| **Projects** | Cullinan Ranch (NE end of Mare Island, N. of Highway 37) |
| **Comments** | A bit outside of project area but a big potential user of clean materials. 1500 acres, going to dig pits to make 0.7 miles of levee then need to raise it 5'. |
| **Contact Record** | 1/22/10 - Called, office already closed. Christy Smith is sending me a map.<br>2/1/10 - Linda Fiack sent message to Jeff Hart and Jeff McCreary of Ducks Unlimited, the Commission's partners on the Working Landscapes Grant. They did not respond by 2/16/10, assumed uninterested. |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Natural Heritage Institute | | | | | | |
| **Organization Type** | NGO | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | 100 Pine St., Suite 1550, San Francisco, CA 94111, Phone: (415) 693-3000, Fax: (415) 693-3178 | | | | | | |
| **Projects** | Delta Restoration | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 1/20/10 - Left message. Did not return call - assume uninterested. | | | | | | |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Sacramento |
| **Organization** | Resource Conservation Districts - Sacramento | | | | | | |
| **Organization Type** | NGO | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Elk Grove Service Center 916-714-1104 | | | | | | |
| **Projects** | Land Management, Rural Development, NRCS, | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | 1/15/10 - NRCS Dan Taverner - no needs; referred me to Ted (below) and the Consumnes River Preserve.<br>1/15/10 - Farm Service Agency - Ted, left message.<br>1/27/10 - assumed no interest. | | | | | | |

# USACE DREDGING CONTACT LIST

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Status** | Done | **Placement** | No | **Reuse** | No | **Relevant Unit** | Both |
| **Organization** | Resource Conservation Districts - Solano | | | | | | |
| **Organization Type** | NGO | | | | | **Inquiry Type** | Placement/Reuse |
| **Days, Hours, Initial Phone #s and Contacts** | Dixon Service Center 707-678-1931 | | | | | | |
| **Projects** | Land Management, Farm Service Agency, NRCS | | | | | | |
| **Comments** | | | | | | | |
| **Contact Record** | Judy -> John Curry says no need; have surplus. | | | | | | |

# APPENDIX B

# GIS DATA FILES REVIEWED FOR PROJECT RELEVANCE

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| | dbf | delta2m.img.vat.dbf | 28 | 1/3/2010 | 3/12/2010 |
| | img | delta2m.img | 65 | 1/3/2010 | 3/12/2010 |
| Agricultural Commissioners | dbf | fieldborders.dbf | 893 | 2/24/2010 | 3/12/2010 |
| Agricultural Commissioners | dbf | SJC_Crops2009.dbf | 3,703 | 2/1/2010 | 3/12/2010 |
| Agricultural Commissioners | shp | fieldborders.shp | 2,038 | 2/24/2010 | 3/12/2010 |
| Agricultural Commissioners | shp | SJC_Crops2009.shp | 7,214 | 2/1/2010 | 3/12/2010 |
| AnchorEnv | dbf | CDL_levee_centerline.dbf | 24,486 | 1/4/2010 | 1/4/2010 |
| AnchorEnv | dbf | cities.dbf | 1,067 | 1/14/2010 | 1/27/2010 |
| AnchorEnv | dbf | counties_polys.dbf | 46 | 1/5/2010 | 1/5/2010 |
| AnchorEnv | dbf | CurrentUplandDisposalPLG.dbf | 1 | 1/5/2010 | 1/5/2010 |
| AnchorEnv | dbf | disposal-polys_all.dbf | 5 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | dbf | disposal-polys_all.dbf | 5 | 2/22/2010 | 2/26/2010 |
| AnchorEnv | dbf | Dredge_Mats_Pl_Sites.dbf | 5 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | dbf | hydro_delta_marsh.dbf | 39 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | dbf | levees_delta.dbf | 936 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | dbf | Placement_various_sources.dbf | 1 | 2/22/2010 | 2/25/2010 |
| AnchorEnv | dbf | rwqcbnda_Teal27.dbf | 2 | 1/5/2010 | 1/5/2010 |
| AnchorEnv | dbf | SiteCities.dbf | 113 | 1/14/2010 | 1/18/2010 |
| AnchorEnv | dbf | SPK_NLD_LeveeSEGMENT_start_end.dbf | 197 | 1/4/2010 | 1/4/2010 |
| AnchorEnv | dbf | SPK_NLD_LeveeSEGMENTS.dbf | 531 | 1/4/2010 | 1/4/2010 |
| AnchorEnv | dbf | StateWaterProjectWaterways.dbf | 10 | 1/5/2010 | 1/18/2010 |
| AnchorEnv | shp | CDL_levee_centerline.shp | 10,297 | 1/4/2010 | 1/27/2010 |
| AnchorEnv | shp | cities.shp | 111 | 1/14/2010 | 1/27/2010 |
| AnchorEnv | shp | counties_polys.shp | 8,063 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | shp | CurrentUplandDisposalPLG.shp | 14 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | shp | DeepH2Ochannelforbuffer_Buff.shp | 28 | 1/4/2010 | 2/24/2010 |
| AnchorEnv | shp | DeepWaterChannelPly.shp | 2 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | shp | delta_primary_zone.shp | 41 | 1/4/2010 | 2/22/2010 |
| AnchorEnv | shp | disposal-polys_all.shp | 12 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | shp | disposal-polys_all.shp | 12 | 2/22/2010 | 2/26/2010 |
| AnchorEnv | shp | Dredge_Mats_Pl_Sites.shp | 49 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | shp | hydro_delta_marsh.shp | 2,186 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | shp | legal_delta.shp | 34 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | shp | levees_delta.shp | 778 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | shp | Placement_various_sources.shp | 12 | 2/22/2010 | 2/25/2010 |
| AnchorEnv | shp | potential_disposal_sites.shp | 5 | 1/4/2010 | 2/24/2010 |
| AnchorEnv | shp | regulatory_boundary.shp | 173 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | shp | rwqcbnda_Teal27.shp | 3,407 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | shp | SiteCities.shp | 11 | 1/14/2010 | 2/22/2010 |
| AnchorEnv | shp | SPK_NLD_LeveeSEGMENT_start_end.shp | 35 | 1/4/2010 | 1/27/2010 |
| AnchorEnv | shp | SPK_NLD_LeveeSEGMENTS.shp | 3,126 | 1/4/2010 | 1/27/2010 |
| AnchorEnv | shp | srdwsc_delineation_draft_Dis.shp | 273 | 1/5/2010 | 1/27/2010 |
| AnchorEnv | shp | StateWaterProjectWaterways.shp | 1,311 | 1/5/2010 | 2/22/2010 |
| AnchorEnv | shp | Stockton_channel_divided.shp | 313 | 1/4/2010 | 2/22/2010 |
| Bureau_Land_Management_C | freel | a00000008.freelist | 4 | 1/5/2010 | 1/5/2010 |
| Bureau_Land_Management_C | freel | a0000001c.freelist | 4 | 1/5/2010 | 1/5/2010 |
| Bureau_Land_Management_C | txt | Read_Me.txt | 3 | 1/14/2010 | 1/14/2010 |
| Caltrans | dbf | airp_bnd.dbf | 2 | 1/3/2010 | 1/18/2010 |
| Caltrans | dbf | airp_rw.dbf | 119 | 1/3/2010 | 1/5/2010 |
| Caltrans | dbf | airpoint.dbf | 697 | 1/3/2010 | 3/3/2010 |
| Caltrans | dbf | airport.dbf | 71 | 1/3/2010 | 1/5/2010 |
| Caltrans | dbf | alt_bike.dbf | 270 | 1/3/2010 | 1/11/2010 |
| Caltrans | dbf | amtrkbus.dbf | 57 | 1/3/2010 | 1/3/2010 |
| Caltrans | dbf | block00.dbf | 124,326 | 1/3/2010 | 1/14/2010 |
| Caltrans | dbf | bus_fdr.dbf | 290 | 1/3/2010 | 1/3/2010 |
| Caltrans | dbf | bus_term.dbf | 2 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| Caltrans | dbf | calw221.dbf | 4,419 | 1/3/2010 | 1/7/2010 |
| Caltrans | dbf | chinesu.dbf | 5 | 1/3/2010 | 1/7/2010 |
| Caltrans | dbf | cities.dbf | 168 | 1/3/2010 | 1/14/2010 |
| Caltrans | dbf | coast24.dbf | 6 | 1/3/2010 | 1/7/2010 |
| Caltrans | dbf | com_frry.dbf | 1 | 1/3/2010 | 1/5/2010 |
| Caltrans | dbf | ctis_h_pl.dbf | 1,004 | 1/3/2010 | 3/4/2010 |
| Caltrans | dbf | ctis_h_pr.dbf | 2,326 | 1/3/2010 | 3/4/2010 |
| Caltrans | dbf | cvef.dbf | 93 | 1/3/2010 | 1/3/2010 |
| Caltrans | dbf | floodzn.dbf | 2,529 | 1/3/2010 | 1/28/2010 |
| Caltrans | dbf | fr_facl.dbf | 4 | 1/3/2010 | 1/3/2010 |
| Caltrans | dbf | fta_bus.dbf | 1,477 | 1/3/2010 | 1/5/2010 |
| Caltrans | dbf | func.dbf | 42,408 | 1/3/2010 | 1/12/2010 |
| Caltrans | dbf | geoname.dbf | 10,711 | 1/3/2010 | 1/6/2010 |
| Caltrans | dbf | govtown.dbf | 1,599 | 1/3/2010 | 1/6/2010 |
| Caltrans | dbf | hov.dbf | 68 | 1/3/2010 | 1/11/2010 |
| Caltrans | dbf | hydro.dbf | 81,621 | 1/3/2010 | 1/11/2010 |
| Caltrans | dbf | hydropo.dbf | 2,792 | 1/3/2010 | 1/11/2010 |
| Caltrans | dbf | lake500.dbf | 8 | 1/3/2010 | 1/7/2010 |
| Caltrans | dbf | loc_br.dbf | 6,024 | 1/3/2010 | 1/11/2010 |
| Caltrans | dbf | local_pl.dbf | 2,639 | 1/3/2010 | 3/3/2010 |
| Caltrans | dbf | local_pr.dbf | 1,843 | 1/3/2010 | 3/3/2010 |
| Caltrans | dbf | offsr_is.dbf | 18 | 1/3/2010 | 1/7/2010 |
| Caltrans | dbf | pl_bpt.dbf | 2,576 | 1/3/2010 | 3/3/2010 |
| Caltrans | dbf | pl_charted.dbf | 1,533 | 1/3/2010 | 3/3/2010 |
| Caltrans | dbf | places.dbf | 761 | 1/3/2010 | 1/5/2010 |
| Caltrans | dbf | pls.dbf | 35,434 | 1/3/2010 | 1/14/2010 |
| Caltrans | dbf | port_bnd.dbf | 2 | 1/3/2010 | 1/5/2010 |
| Caltrans | dbf | port.dbf | 2 | 1/3/2010 | 1/5/2010 |
| Caltrans | dbf | pr_bpt.dbf | 272 | 1/3/2010 | 1/3/2010 |
| Caltrans | dbf | precip.dbf | 36 | 1/3/2010 | 1/7/2010 |
| Caltrans | dbf | prk_rde.dbf | 205 | 1/3/2010 | 1/11/2010 |
| Caltrans | dbf | river500.dbf | 172 | 1/3/2010 | 1/7/2010 |
| Caltrans | dbf | schools.dbf | 77,104 | 1/3/2010 | 1/7/2010 |
| Caltrans | dbf | stlesu.dbf | 3 | 1/3/2010 | 1/7/2010 |
| Caltrans | dbf | tnkr_trm.dbf | 3 | 1/3/2010 | 1/3/2010 |
| Caltrans | dbf | trknet.dbf | 401 | 1/3/2010 | 1/5/2010 |
| Caltrans | dbf | urban_dissolved.dbf | 20 | 1/3/2010 | 1/6/2010 |
| Caltrans | dbf | urban_history.dbf | 1,482 | 1/3/2010 | 1/6/2010 |
| Caltrans | dbf | vernal_pool.dbf | 41 | 1/3/2010 | 1/14/2010 |
| Caltrans | dbf | vernal_pool.dbf | 41 | 1/14/2010 | 1/18/2010 |
| Caltrans | img | landcover2_3k_022007.img | 147,863 | 1/3/2010 | 1/3/2010 |
| Caltrans | sgml | z03metadata_landcov.sgml | 48 | 1/3/2010 | 1/3/2010 |
| Caltrans | sgml | z04metadata_landcov.sgml | 48 | 1/3/2010 | 1/3/2010 |
| Caltrans | sgml | z05metadata_landcov.sgml | 38 | 1/3/2010 | 1/3/2010 |
| Caltrans | sgml | z06metadata_landcov.sgml | 38 | 1/3/2010 | 1/3/2010 |
| Caltrans | sgml | z12metadata_landcov.sgml | 39 | 1/3/2010 | 1/3/2010 |
| Caltrans | sgml | z13metadata_landcov.sgml | 40 | 1/3/2010 | 1/3/2010 |
| Caltrans | shp | airp_bnd.shp | 17 | 1/3/2010 | 1/18/2010 |
| Caltrans | shp | airp_rw.shp | 819 | 1/3/2010 | 1/18/2010 |
| Caltrans | shp | airpoint.shp | 57 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | airport.shp | 8 | 1/3/2010 | 1/18/2010 |
| Caltrans | shp | alt_bike.shp | 848 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | amtrkbus.shp | 5 | 1/3/2010 | 1/11/2010 |
| Caltrans | shp | block00.shp | 219,664 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | bus_fdr.shp | 240 | 1/3/2010 | 1/11/2010 |
| Caltrans | shp | calw221.shp | 46,879 | 1/3/2010 | 3/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| Caltrans | shp | chinesu.shp | 1,703 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | cities.shp | 3,933 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | coast24.shp | 463 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | cohoesu.shp | 588 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | com_frry.shp | 1 | 1/3/2010 | 1/11/2010 |
| Caltrans | shp | ctis_h_pl.shp | 700 | 1/3/2010 | 3/4/2010 |
| Caltrans | shp | ctis_h_pr.shp | 1,656 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | cvef.shp | 2 | 1/3/2010 | 1/11/2010 |
| Caltrans | shp | floodzn.shp | 96,169 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | fta_bus.shp | 7,086 | 1/3/2010 | 1/11/2010 |
| Caltrans | shp | func.shp | 23,100 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | geoname.shp | 1,714 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | govtown.shp | 12,678 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | hov.shp | 346 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | hydro.shp | 73,893 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | hydropo.shp | 782 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | lake500.shp | 286 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | loc_br.shp | 347 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | local_pl.shp | 512 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | local_pr.shp | 214 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | offsr_is.shp | 462 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | pl_bpt.shp | 27 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | pl_charted.shp | 36 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | places.shp | 87 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | pls.shp | 27,804 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | port_bnd.shp | 19 | 1/3/2010 | 1/11/2010 |
| Caltrans | shp | pr_bpt.shp | 4 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | precip.shp | 1,577 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | prk_rde.shp | 10 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | river500.shp | 993 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | schools.shp | 283 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | stlesu.shp | 1,659 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | trknet.shp | 2,887 | 1/3/2010 | 1/11/2010 |
| Caltrans | shp | urban_dissolved.shp | 1,748 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | urban_history.shp | 6,316 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | vernal_pool.shp | 130 | 1/3/2010 | 3/3/2010 |
| Caltrans | shp | vernal_pool.shp | 130 | 1/14/2010 | 3/3/2010 |
| Caltrans | txt | z03metadata_landcov.txt | 56 | 1/3/2010 | 1/3/2010 |
| Caltrans | txt | z04metadata_landcov.txt | 56 | 1/3/2010 | 1/3/2010 |
| Caltrans | txt | z05metadata_landcov.txt | 43 | 1/3/2010 | 1/3/2010 |
| Caltrans | txt | z06metadata_landcov.txt | 43 | 1/3/2010 | 1/3/2010 |
| Caltrans | txt | z12metadata_landcov.txt | 45 | 1/3/2010 | 1/3/2010 |
| Caltrans | txt | z13metadata_landcov.txt | 45 | 1/3/2010 | 1/3/2010 |
| CASIL | dbf | csp09_2_sorted.dbf | 49 | 1/18/2010 | 2/10/2010 |
| CASIL | dbf | genplans_rr.dbf | 15,718 | 1/3/2010 | 1/3/2010 |
| CASIL | dbf | genplans.dbf | 19,336 | 1/3/2010 | 1/14/2010 |
| CASIL | dbf | inaccreg.dbf | 10 | 1/18/2010 | 1/20/2010 |
| CASIL | dbf | NED_index.dbf | 19 | 2/18/2010 | 2/18/2010 |
| CASIL | dbf | plsa.dbf | 25,333 | 1/18/2010 | 2/22/2010 |
| CASIL | shp | csp09_2_sorted.shp | 5,022 | 1/18/2010 | 2/10/2010 |
| CASIL | shp | genplans_rr.shp | 132,661 | 1/3/2010 | 2/22/2010 |
| CASIL | shp | genplans.shp | 122,406 | 1/3/2010 | 2/22/2010 |
| CASIL | shp | inaccreg.shp | 2,244 | 1/18/2010 | 2/10/2010 |
| CASIL | shp | NED_index.shp | 10 | 2/18/2010 | 2/18/2010 |
| CASIL | shp | plsa.shp | 24,360 | 1/18/2010 | 2/22/2010 |
| CASIL | txt | plsa.txt | 5 | 1/18/2010 | 1/18/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| CEC | dbf | Natural_Gas_Pipelines_Select_Co.dbf | 87 | 3/1/2010 | 3/12/2010 |
| CEC | dbf | Natural_Gas_Wells_Select_Co.dbf | 296 | 3/1/2010 | 3/12/2010 |
| CEC | dbf | Oil_Wells_Select_Co.dbf | 2,709 | 3/1/2010 | 3/12/2010 |
| CEC | dbf | Petroleum_Pipelines_Select_Co.dbf | 26 | 3/1/2010 | 3/12/2010 |
| CEC | dbf | Substations_Select_Co.dbf | 482 | 3/1/2010 | 3/12/2010 |
| CEC | dbf | Transmission_Line_Select_Co.dbf | 1,142 | 3/1/2010 | 3/12/2010 |
| CEC | shp | Natural_Gas_Pipelines_Select_Co.shp | 61 | 3/1/2010 | 3/12/2010 |
| CEC | shp | Natural_Gas_Wells_Select_Co.shp | 26 | 3/1/2010 | 3/12/2010 |
| CEC | shp | Oil_Wells_Select_Co.shp | 233 | 3/1/2010 | 3/12/2010 |
| CEC | shp | Petroleum_Pipelines_Select_Co.shp | 1,136 | 3/1/2010 | 3/12/2010 |
| CEC | shp | Substations_Select_Co.shp | 19 | 3/1/2010 | 3/12/2010 |
| CEC | shp | Transmission_Line_Select_Co.shp | 724 | 3/1/2010 | 3/12/2010 |
| CEC | txt | Oil Wells_Fields.txt | 5 | 3/1/2010 | 3/1/2010 |
| contours | dwg | A-Craw.dwg | 146,655 | 1/26/2010 | 2/5/2010 |
| contours | dwg | D-E-RAW.dwg | 201,609 | 1/26/2010 | 2/5/2010 |
| contours | dwg | Fraw.dwg | 124,067 | 1/26/2010 | 2/5/2010 |
| contours | dwg | graw.dwg | 96,493 | 1/26/2010 | 2/5/2010 |
| contours | dwg | Hraw.dwg | 108,453 | 1/26/2010 | 2/5/2010 |
| contours | dwg | Iraw.dwg | 131,340 | 1/26/2010 | 2/5/2010 |
| contours | dwg | j-east-raw.dwg | 100,343 | 1/26/2010 | 2/5/2010 |
| contours | dwg | j-west-raw.dwg | 533,823 | 1/26/2010 | 2/5/2010 |
| contours | dwg | k1east.dwg | 78,189 | 1/26/2010 | 2/5/2010 |
| contours | dwg | K1West.dwg | 415,005 | 1/26/2010 | 2/5/2010 |
| contours | dwg | K2eastraw.dwg | 85,216 | 1/26/2010 | 2/5/2010 |
| contours | dwg | K2West.dwg | 507,339 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_A10.dwg | 37,848 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_A11.dwg | 27,017 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_A12.dwg | 203,763 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_A13.dwg | 149,935 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_A14.dwg | 44,349 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_A15.dwg | 29,775 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_B10.dwg | 14,431 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_B11.dwg | 18,064 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_B12.dwg | 14,256 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_B13.dwg | 30,448 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_B14.dwg | 46,458 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_B15.dwg | 30,036 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_C10.dwg | 24,783 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_C11.dwg | 42,654 | 1/26/2010 | 2/5/2010 |
| contours | dwg | RAW_C12.dwg | 16,732 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_C13.dwg | 34,465 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_C14.dwg | 78,173 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_C15.dwg | 60,538 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_D10.dwg | 58,917 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_D11.dwg | 24,193 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_D12.dwg | 30,974 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_D13.dwg | 45,820 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_D14.dwg | 153,934 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_D15.dwg | 51,048 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_E10.dwg | 129,741 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_E11.dwg | 26,905 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_E12.dwg | 38,654 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_E13.dwg | 100,160 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_E14.dwg | 65,917 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_E15.dwg | 29,581 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_E9.dwg | 49,732 | 1/22/2010 | 2/5/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| contours | dwg | RAW_F10.dwg | 62,702 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_F11.dwg | 33,629 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_F12.dwg | 107,845 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_F13.dwg | 17,589 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_F14.dwg | 16,077 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_F15.dwg | 21,345 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_F16.dwg | 10,302 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_F9.dwg | 112,032 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_G10.dwg | 60,917 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_G11.dwg | 75,365 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_G12.dwg | 69,908 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_G14.dwg | 2,638 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_G15.dwg | 30,888 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_G16.dwg | 45,041 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_G17.dwg | 12,216 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_G5-bot.dwg | 72,575 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_G5.dwg | 76,069 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_G5top.dwg | 76,091 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_G6.dwg | 156,735 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_G9.dwg | 107,067 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H10.dwg | 43,490 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H11.dwg | 36,433 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H12.dwg | 79,602 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H13.dwg | 4,714 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H14.dwg | 32,790 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H15.dwg | 30,870 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H16.dwg | 52,928 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H17.dwg | 42,531 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H18.dwg | 6,600 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H4.dwg | 149,492 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_H5-bot3rd.dwg | 136,546 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_H5-MID.dwg | 163,347 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_H5.dwg | 113,584 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H6_revised.dwg | 12,288 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H7.dwg | 61,901 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H8.dwg | 80,869 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_H9.dwg | 106,111 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I10.dwg | 48,400 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I11.dwg | 40,000 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I12.dwg | 52,664 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I13.dwg | 74,721 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I14.dwg | 56,029 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I15.dwg | 43,481 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I16.dwg | 27,729 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I17.dwg | 40,319 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I18.dwg | 30,242 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I19.dwg | 24,374 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I20.dwg | 12,730 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I21.dwg | 10,080 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I22.dwg | 1,805 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I4.dwg | 147,484 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_I5-bot-3rd.dwg | 132,431 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_I5-MID.dwg | 139,268 | 1/25/2010 | 2/5/2010 |
| contours | dwg | RAW_I5.dwg | 135,899 | 1/22/2010 | 2/5/2010 |
| contours | dwg | RAW_I6.dwg | 349,006 | 1/22/2010 | 2/5/2010 |
| contours | freel | a00000001.freelist | 4 | 2/18/2010 | 2/18/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| contours | freel | a00000006.freelist | 4 | 2/18/2010 | 2/18/2010 |
| contours | freel | a00000007.freelist | 4 | 2/18/2010 | 2/18/2010 |
| contours | freel | a00000008.freelist | 9 | 2/18/2010 | 2/18/2010 |
| contours | freel | a0000001c.freelist | 9 | 2/18/2010 | 2/19/2010 |
| contours | freel | a00000030.freelist | 70 | 1/25/2010 | 1/25/2010 |
| contours | txt | 12-26acad.txt | 1 | 1/26/2010 | 1/26/2010 |
| contours | txt | acad-raw.txt | 12 | 1/25/2010 | 1/25/2010 |
| contours | txt | dir-and-file-structure.txt | 29 | 1/26/2010 | 1/26/2010 |
| DeltaVision_CASIL | dbf | ag_drain_returns.dbf | 2 | 1/3/2010 | 1/5/2010 |
| DeltaVision_CASIL | dbf | Agriculture.dbf | 139 | 1/3/2010 | 2/22/2010 |
| DeltaVision_CASIL | dbf | boat_launches.dbf | 6 | 1/5/2010 | 1/18/2010 |
| DeltaVision_CASIL | dbf | Bridges_delta_urs.dbf | 3 | 1/5/2010 | 1/18/2010 |
| DeltaVision_CASIL | dbf | Conservation_Lands.dbf | 28 | 1/5/2010 | 1/18/2010 |
| DeltaVision_CASIL | dbf | delta_subsidence.dbf | 2,277 | 1/3/2010 | 1/11/2010 |
| DeltaVision_CASIL | dbf | gas_oil_production_fields.dbf | 2 | 1/18/2010 | 1/18/2010 |
| DeltaVision_CASIL | dbf | historic_inundation_islands.dbf | 13 | 1/3/2010 | 1/11/2010 |
| DeltaVision_CASIL | dbf | Land_Use_delta_vision.dbf | 12,748 | 1/5/2010 | 3/12/2010 |
| DeltaVision_CASIL | dbf | levees_delta.dbf | 728 | 1/5/2010 | 1/18/2010 |
| DeltaVision_CASIL | dbf | local_flood_district_delta_marsh_active.dbf | 10 | 1/3/2010 | 1/14/2010 |
| DeltaVision_CASIL | dbf | Parks.dbf | 29 | 1/3/2010 | 1/14/2010 |
| DeltaVision_CASIL | dbf | Points_of_Diversion_delta_vision.dbf | 108 | 1/3/2010 | 1/14/2010 |
| DeltaVision_CASIL | dbf | Protected_Lands.dbf | 27 | 1/14/2010 | 1/18/2010 |
| DeltaVision_CASIL | dbf | Railroads.dbf | 36 | 1/12/2010 | 1/12/2010 |
| DeltaVision_CASIL | dbf | suisun_subsidence_nodeltaoverlap.dbf | 22 | 1/3/2010 | 1/11/2010 |
| DeltaVision_CASIL | dbf | traffic_flows.dbf | 11 | 1/3/2010 | 1/5/2010 |
| DeltaVision_CASIL | dbf | Urban_Area_FMMP_2004_delta.dbf | 56 | 1/3/2010 | 1/11/2010 |
| DeltaVision_CASIL | shp | ag_drain_returns.shp | 7 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Agriculture.shp | 337 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | boat_launches.shp | 2 | 1/5/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Bridges_delta_urs.shp | 13 | 1/5/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Conservation_Lands.shp | 162 | 1/5/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Deep_Water_Ship_Channels.shp | 63 | 1/5/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Delta_and_Suisun_Primary_Zone.shp | 66 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Delta_and_Suisun_Secondary_Zone.shp | 76 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | delta_marsh_watersheds.shp | 1,025 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | delta_subsidence.shp | 18,588 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | elevation.shp | 16,059 | 1/5/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | gas_oil_production_fields.shp | 115 | 1/18/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | historic_inundation_islands.shp | 849 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Land_Use_delta_vision.shp | 26,034 | 1/5/2010 | 3/12/2010 |
| DeltaVision_CASIL | shp | legal_delta_and_suisun_boundary.shp | 37 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Legal_Delta.shp | 34 | 1/5/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | levees_delta.shp | 778 | 1/5/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | local_flood_district_delta_marsh_active.shp | 479 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Managed_Lands.shp | 21 | 1/14/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | MokelumneAqueductPipe.shp | 61 | 1/5/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Parks.shp | 3 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Points_of_Diversion_delta_vision.shp | 82 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Protected_Lands.shp | 150 | 1/14/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Railroads.shp | 211 | 1/12/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Sbjct_ONLY_to_lcl_plnnng_and_znng.shp | 216 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Suisun_Border.shp | 4 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | suisun_subsidence_nodeltaoverlap.shp | 2,875 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | traffic_flows.shp | 9 | 1/3/2010 | 2/25/2010 |
| DeltaVision_CASIL | shp | Urban_Area_FMMP_2004_delta.shp | 1,186 | 1/3/2010 | 2/25/2010 |
| DOGGR | dbf | Dist_6wells_UTM10NAD83_Buffe250ft.dbf | 615 | 3/10/2010 | 3/12/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| DOGGR | dbf | Dist_6wells_UTM10NAD83_Buffe250ftClp.dbf | 137 | 3/11/2010 | 3/12/2010 |
| DOGGR | dbf | Dist_6wells_UTM10NAD83.dbf | 2,579 | 3/10/2010 | 3/10/2010 |
| DOGGR | dbf | Dist_6wells.dbf | 2,839 | 1/5/2010 | 3/12/2010 |
| DOGGR | shp | Dist_6wells_UTM10NAD83_Buffe250ft.shp | 2,545 | 3/10/2010 | 3/12/2010 |
| DOGGR | shp | Dist_6wells_UTM10NAD83_Buffe250ftClp.shp | 570 | 3/11/2010 | 3/12/2010 |
| DOGGR | shp | Dist_6wells_UTM10NAD83.shp | 303 | 3/10/2010 | 3/11/2010 |
| DOGGR | shp | Dist_6wells.shp | 303 | 1/5/2010 | 3/12/2010 |
| DWR | dbf | 76dl.dbf | 1,212 | 1/3/2010 | 1/3/2010 |
| DWR | dbf | 91dl.dbf | 1,653 | 1/3/2010 | 1/3/2010 |
| DWR | dbf | 93dl.dbf | 1,796 | 1/3/2010 | 1/3/2010 |
| DWR | dbf | landuse_delta_smarsh_2007.dbf | 9,404 | 2/25/2010 | 3/4/2010 |
| DWR | freel | a00000001.freelist | 4 | 2/19/2010 | 2/19/2010 |
| DWR | freel | a00000006.freelist | 4 | 2/19/2010 | 2/19/2010 |
| DWR | freel | a00000007.freelist | 4 | 2/19/2010 | 2/19/2010 |
| DWR | freel | a00000008.freelist | 9 | 2/19/2010 | 2/19/2010 |
| DWR | freel | a0000001c.freelist | 9 | 2/19/2010 | 2/19/2010 |
| DWR | freel | a00000026.freelist | 70 | 2/19/2010 | 2/22/2010 |
| DWR | pdf | 76dlmeta.pdf | 28 | 1/3/2010 | 1/3/2010 |
| DWR | pdf | 91dlmeta.pdf | 28 | 1/3/2010 | 1/3/2010 |
| DWR | pdf | 93dlmeta.pdf | 25 | 1/3/2010 | 1/3/2010 |
| DWR | pdf | attributes_v2009.pdf | 23 | 1/3/2010 | 1/3/2010 |
| DWR | pdf | attributes_v2009.pdf | 23 | 1/3/2010 | 1/3/2010 |
| DWR | pdf | attributes_v2009.pdf | 23 | 1/3/2010 | 1/3/2010 |
| DWR | pdf | DWR Data Disclaimer.pdf | 13 | 1/3/2010 | 1/3/2010 |
| DWR | pdf | DWR Data Disclaimer.pdf | 13 | 1/3/2010 | 1/3/2010 |
| DWR | pdf | DWR Data Disclaimer.pdf | 13 | 1/3/2010 | 1/3/2010 |
| DWR | pdf | Sacramento_Lidar_Final_Report_111909. | 12,951 | 12/16/2009 | 1/20/2010 |
| DWR | shp | 76dl.shp | 3,990 | 1/3/2010 | 1/7/2010 |
| DWR | shp | 91dl.shp | 5,155 | 1/3/2010 | 1/7/2010 |
| DWR | shp | 93dl.shp | 5,429 | 1/3/2010 | 1/3/2010 |
| DWR | shp | landuse_delta_smarsh_2007.shp | 40,415 | 2/25/2010 | 3/5/2010 |
| Farmland Mapping CA | ftplo | ._File-contracosta2008.dbf.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-contracosta2008.prj.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-contracosta2008.sbn.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-contracosta2008.sbx.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-contracosta2008.shp.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-contracosta2008.shx.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sacramento2006.dbf.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sacramento2006.prj.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sacramento2006.sbn.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sacramento2006.sbx.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sacramento2006.shp.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sacramento2006.shx.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sanjoaquin2006.dbf.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sanjoaquin2006.prj.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sanjoaquin2006.sbn.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sanjoaquin2006.sbx.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sanjoaquin2006.shp.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-sanjoaquin2006.shx.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-soloano2008.dbf.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-soloano2008.prj.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-soloano2008.sbn.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-soloano2008.sbx.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-soloano2008.shp.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-soloano2008.shx.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-yolo2006.dbf.ftploc | 4 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| Farmland Mapping CA | ftplo | ._File-yolo2006.prj.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-yolo2006.sbn.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-yolo2006.sbx.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-yolo2006.shp.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| Farmland Mapping CA | ftplo | ._File-yolo2006.shx.ftploc | 4 | 1/3/2010 | 1/3/2010 |
| FEMA | dbf | L_COMM_INFO.dbf | 145 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | L_MT1_LOMC.dbf | 184 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | L_PAN_REVIS.dbf | 167 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | L_POL_FHBM.dbf | 1 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | L_STN_START.dbf | 221 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | S_BASE_INDEX.dbf | 704 | 1/3/2010 | 1/15/2010 |
| FEMA | dbf | S_BFE.dbf | 4,700 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | S_FIRM_PAN.dbf | 1,434 | 1/3/2010 | 1/15/2010 |
| FEMA | dbf | S_FLD_HAZ_AR_SiteClip.dbf | 1,851 | 1/15/2010 | 1/15/2010 |
| FEMA | dbf | S_FLD_HAZ_AR_SiteClip.dbf | 1,851 | 1/15/2010 | 1/18/2010 |
| FEMA | dbf | S_FLD_HAZ_AR.dbf | 11,277 | 1/3/2010 | 1/28/2010 |
| FEMA | dbf | S_FLD_HAZ_AR.dbf | 11,277 | 1/14/2010 | 1/14/2010 |
| FEMA | dbf | S_FLD_HAZ_LN.dbf | 10,071 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | S_GEN_STRUCT.dbf | 3,598 | 1/3/2010 | 1/15/2010 |
| FEMA | dbf | S_LOMR.dbf | 58 | 1/3/2010 | 1/15/2010 |
| FEMA | dbf | S_PERM_BMK.dbf | 1,258 | 1/3/2010 | 1/14/2010 |
| FEMA | dbf | S_PLSS_AR.dbf | 6,821 | 1/3/2010 | 1/15/2010 |
| FEMA | dbf | S_PLSS_LN.dbf | 22,049 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | S_POL_AR.dbf | 571 | 1/3/2010 | 1/15/2010 |
| FEMA | dbf | S_POL_LN.dbf | 1,491 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | S_PROFIL_BASLN.dbf | 302 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | S_QUAD_INDEX.dbf | 317 | 1/3/2010 | 1/11/2010 |
| FEMA | dbf | S_RIV_MRK.dbf | 70 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | S_TRNSPORT_LN.dbf | 466,413 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | S_WTR_AR.dbf | 613 | 1/3/2010 | 1/15/2010 |
| FEMA | dbf | S_WTR_LN.dbf | 15,968 | 1/3/2010 | 1/6/2010 |
| FEMA | dbf | S_XS.dbf | 5,753 | 1/6/2010 | 1/11/2010 |
| FEMA | dbf | STUDY_INFO.dbf | 24 | 1/3/2010 | 1/6/2010 |
| FEMA | shp | S_BASE_INDEX.shp | 1,080 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_BFE.shp | 5,052 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_FIRM_PAN.shp | 2,457 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_FLD_HAZ_AR_SiteClip.shp | 29,394 | 1/15/2010 | 1/15/2010 |
| FEMA | shp | S_FLD_HAZ_AR_SiteClip.shp | 29,394 | 1/15/2010 | 1/18/2010 |
| FEMA | shp | S_FLD_HAZ_AR.shp | 163,918 | 1/3/2010 | 1/28/2010 |
| FEMA | shp | S_FLD_HAZ_AR.shp | 163,918 | 1/14/2010 | 1/18/2010 |
| FEMA | shp | S_FLD_HAZ_LN.shp | 80,408 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_GEN_STRUCT.shp | 5,034 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_LOMR.shp | 146 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_PERM_BMK.shp | 440 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_PLSS_AR.shp | 19,115 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_PLSS_LN.shp | 19,568 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_POL_AR.shp | 16,180 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_POL_LN.shp | 16,010 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_PROFIL_BASLN.shp | 538 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_QUAD_INDEX.shp | 2,871 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_RIV_MRK.shp | 20 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_TRNSPORT_LN.shp | 191,528 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_WTR_AR.shp | 5,743 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_WTR_LN.shp | 47,511 | 1/3/2010 | 1/15/2010 |
| FEMA | shp | S_XS.shp | 2,493 | 1/6/2010 | 3/5/2010 |
| FEMA | txt | NFHL_Metadata_20091118.txt | 33 | 1/3/2010 | 1/15/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| FEMA | txt | NFHL_Metadata_20091118.txt | 33 | 1/14/2010 | 1/14/2010 |
| FishandGame | dbf | amer5ac_p.dbf | 1,845 | 4/6/2005 | 3/5/2010 |
| FishandGame | dbf | butte5ac_p.dbf | 1,654 | 4/6/2005 | 3/5/2010 |
| FishandGame | DBF | CODES.DBF | 1 | 12/10/1999 | 3/5/2010 |
| FishandGame | dbf | col5ac_p.dbf | 1,788 | 4/6/2005 | 3/5/2010 |
| FishandGame | dbf | delta5ac_p.dbf | 3,078 | 4/6/2005 | 3/12/2010 |
| FishandGame | dbf | merge_sui_yolo_delta.dbf | 6,327 | 3/5/2010 | 3/10/2010 |
| FishandGame | dbf | sanjoa5ac_p.dbf | 5,385 | 4/6/2005 | 3/5/2010 |
| FishandGame | dbf | sfbay5ac_p.dbf | 3,582 | 4/6/2005 | 3/5/2010 |
| FishandGame | dbf | suisun5ac_p.dbf | 411 | 4/6/2005 | 3/12/2010 |
| FishandGame | dbf | sut5ac_p.dbf | 680 | 4/6/2005 | 3/5/2010 |
| FishandGame | dbf | yolo5ac_p.dbf | 1,066 | 4/6/2005 | 3/12/2010 |
| FishandGame | shp | amer5ac_p.shp | 17,765 | 4/6/2005 | 3/10/2010 |
| FishandGame | shp | butte5ac_p.shp | 16,723 | 4/6/2005 | 3/10/2010 |
| FishandGame | shp | col5ac_p.shp | 22,893 | 4/6/2005 | 3/10/2010 |
| FishandGame | shp | delta5ac_p.shp | 35,139 | 4/6/2005 | 3/12/2010 |
| FishandGame | shp | dfg_regions_high_res.shp | 5,053 | 1/3/2010 | 1/6/2010 |
| FishandGame | shp | merge_sui_yolo_delta.shp | 52,033 | 3/5/2010 | 3/10/2010 |
| FishandGame | shp | sanjoa5ac_p.shp | 57,621 | 4/6/2005 | 3/10/2010 |
| FishandGame | shp | sfbay5ac_p.shp | 31,670 | 4/6/2005 | 3/10/2010 |
| FishandGame | shp | suisun5ac_p.shp | 3,782 | 4/6/2005 | 3/12/2010 |
| FishandGame | shp | sut5ac_p.shp | 7,360 | 4/6/2005 | 3/10/2010 |
| FishandGame | shp | yolo5ac_p.shp | 13,113 | 4/6/2005 | 3/12/2010 |
| FishandGame | txt | central_valley_wetlands_and_riparian_gis.txt | 30 | 9/29/2003 | 3/10/2010 |
| FishandGame | txt | dfg_regions_high_res.txt | 11 | 1/3/2010 | 1/3/2010 |
| FishandWildlife | dbf | R8_NWR_approved.dbf | 35 | 1/20/2010 | 1/20/2010 |
| FishandWildlife | freel | a00000001.freelist | 9 | 1/3/2010 | 1/20/2010 |
| FishandWildlife | freel | a00000006.freelist | 4 | 1/3/2010 | 1/20/2010 |
| FishandWildlife | freel | a00000007.freelist | 4 | 1/3/2010 | 1/20/2010 |
| FishandWildlife | freel | a00000008.freelist | 9 | 1/3/2010 | 1/20/2010 |
| FishandWildlife | freel | a0000000f.freelist | 4 | 1/20/2010 | 1/20/2010 |
| FishandWildlife | freel | a00000010.freelist | 9 | 1/20/2010 | 1/20/2010 |
| FishandWildlife | freel | a00000017.freelist | 4 | 1/15/2010 | 1/20/2010 |
| FishandWildlife | freel | a00000018.freelist | 4 | 1/20/2010 | 1/20/2010 |
| FishandWildlife | freel | a0000001c.freelist | 41 | 1/3/2010 | 1/27/2010 |
| FishandWildlife | nit | arc0003.nit | 3 | 1/6/2010 | 1/6/2010 |
| FishandWildlife | shp | R8_NWR_approved.shp | 489 | 1/20/2010 | 1/20/2010 |
| Great Circle Information | dbf | o37121e3_ProjectRaster.img.vat.dbf | 17 | 1/21/2010 | 1/21/2010 |
| Great Circle Information | dbf | o37121f2_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121f3_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121f4_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121f5_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121g3_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121g4_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121g5_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121g6_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121h3_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121h4_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121h5_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121h6_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121h7_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o37121h8_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121a3_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121a4_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121a5_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121a6_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| Great Circle Information | dbf | o38121a7_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121a8_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121b3_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121b4_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121b5_ProjectRaster.img.vat.dbf | 17 | 1/5/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121b6_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121b7_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121c4_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121c5_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121c6_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121c7_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121d4_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121d5_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121d6_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121d7_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121e5_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | dbf | o38121e6_ProjectRaster.img.vat.dbf | 17 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121e3_ProjectRaster.img | 24,675 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121e3_ProjectRaster.img | 24,675 | 1/21/2010 | 1/21/2010 |
| Great Circle Information | img | o37121f2_ProjectRaster.img | 28,382 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121f2_ProjectRaster.img | 8,294 | 1/21/2010 | 1/21/2010 |
| Great Circle Information | img | o37121f3_ProjectRaster.img | 28,365 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121f4_ProjectRaster.img | 21,760 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121f5_ProjectRaster.img | 20,025 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121g3_ProjectRaster.img | 27,458 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121g4_ProjectRaster.img | 35,121 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121g5_ProjectRaster.img | 29,189 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121g6_ProjectRaster.img | 21,192 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121h3_ProjectRaster.img | 27,673 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121h4_ProjectRaster.img | 33,610 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121h5_ProjectRaster.img | 28,689 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121h6_ProjectRaster.img | 22,884 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121h7_ProjectRaster.img | 23,114 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o37121h8_ProjectRaster.img | 20,119 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121a3_ProjectRaster.img | 26,781 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121a4_ProjectRaster.img | 24,763 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121a5_ProjectRaster.img | 20,202 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121a6_ProjectRaster.img | 23,004 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121a7_ProjectRaster.img | 18,017 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121a8_ProjectRaster.img | 23,867 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121b3_ProjectRaster.img | 21,082 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121b4_ProjectRaster.img | 32,550 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121b5_ProjectRaster.img | 31,798 | 1/5/2010 | 3/12/2010 |
| Great Circle Information | img | o38121b6_ProjectRaster.img | 24,394 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121b7_ProjectRaster.img | 21,330 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121c4_ProjectRaster.img | 33,585 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121c5_ProjectRaster.img | 31,119 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121c6_ProjectRaster.img | 34,026 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121c7_ProjectRaster.img | 30,311 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121d4_ProjectRaster.img | 25,293 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121d5_ProjectRaster.img | 33,700 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121d6_ProjectRaster.img | 37,425 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121d7_ProjectRaster.img | 35,483 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121e5_ProjectRaster.img | 27,222 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | img | o38121e6_ProjectRaster.img | 29,513 | 1/4/2010 | 3/12/2010 |
| Great Circle Information | tif | o37121e3.tif | 18,308 | 1/3/2010 | 1/21/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| Great Circle Information | tif | o37121f2.tif | 6,498 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121f3.tif | 6,140 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121f4.tif | 10,190 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121f5.tif | 16,791 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121g3.tif | 6,226 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121g4.tif | 5,070 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121g5.tif | 7,273 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121g6.tif | 16,875 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121h3.tif | 10,715 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121h4.tif | 4,481 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121h5.tif | 5,654 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121h6.tif | 8,748 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121h7.tif | 19,498 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o37121h8.tif | 16,958 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121a3.tif | 6,999 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121a4.tif | 5,738 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121a5.tif | 7,259 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121a6.tif | 6,417 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121a7.tif | 11,798 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121a8.tif | 13,361 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121b3.tif | 11,910 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121b4.tif | 5,070 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121b5.tif | 5,477 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121b6.tif | 6,933 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121b7.tif | 10,069 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121c4.tif | 4,492 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121c5.tif | 5,698 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121c6.tif | 4,764 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121c7.tif | 4,822 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121d4.tif | 7,417 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121d5.tif | 6,097 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121d6.tif | 3,841 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121d7.tif | 5,217 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121e5.tif | 6,946 | 1/3/2010 | 1/5/2010 |
| Great Circle Information | tif | o38121e6.tif | 4,800 | 1/3/2010 | 1/5/2010 |
| NOAA_maps | dbf | APPROACH_HARBOR_COALNE_line.dbf | 4,054 | 2/17/2010 | 2/17/2010 |
| NOAA_maps | dbf | APPROACH_HARBOR_DRGARE_poly.dbf | 171 | 2/17/2010 | 2/17/2010 |
| NOAA_maps | dbf | APPROACH_HARBOR_SOUNDINGS_point.dbf | 2,878 | 2/16/2010 | 2/16/2010 |
| NOAA_maps | dbf | APPROACH_HARBOR_SOUNDINGS_point.dbf | 4,830 | 2/17/2010 | 2/17/2010 |
| NOAA_maps | dbf | GreenSturgeonCHDepartmentofDefense.dbf | 1 | 11/2/2009 | 1/12/2010 |
| NOAA_maps | dbf | GreenSturgeonCHEstuaries.dbf | 2 | 11/2/2009 | 1/12/2010 |
| NOAA_maps | dbf | GreenSturgeonCHHeadOfTide.dbf | 112 | 11/2/2009 | 1/12/2010 |
| NOAA_maps | dbf | GreenSturgeonCHMarineCoastalZones.dbf | 2 | 11/2/2009 | 1/12/2010 |
| NOAA_maps | dbf | GreenSturgeonCHMarshAreas.dbf | 23 | 11/2/2009 | 1/12/2010 |
| NOAA_maps | dbf | GreenSturgeonCHStreams.dbf | 215 | 11/2/2009 | 1/13/2010 |
| NOAA_maps | dbf | GreenSturgeonCHTribalExclusions.dbf | 3 | 11/2/2009 | 1/12/2010 |
| NOAA_maps | dbf | SRKW_FCH_11_14_06_NAD83.dbf | 1 | 11/15/2006 | 1/12/2010 |
| NOAA_maps | dbf | StellarSeaLion_CriticalHabitat_CA.dbf | 1 | 4/14/2009 | 1/12/2010 |
| NOAA_maps | shp | APPROACH_HARBOR_COALNE_line.shp | 3,530 | 2/17/2010 | 2/17/2010 |
| NOAA_maps | shp | APPROACH_HARBOR_DRGARE_poly.shp | 196 | 2/17/2010 | 2/17/2010 |
| NOAA_maps | shp | APPROACH_HARBOR_SOUNDINGS_point.shp | 138 | 2/16/2010 | 2/17/2010 |
| NOAA_maps | shp | APPROACH_HARBOR_SOUNDINGS_point.shp | 232 | 2/17/2010 | 2/17/2010 |
| NOAA_maps | shp | GreenSturgeonCHBypassAreas.shp | 14 | 11/2/2009 | 1/14/2010 |
| NOAA_maps | shp | GreenSturgeonCHDepartmentofDefense.shp | 6 | 11/2/2009 | 1/14/2010 |
| NOAA_maps | shp | GreenSturgeonCHEstuaries.shp | 3,947 | 11/2/2009 | 1/14/2010 |
| NOAA_maps | shp | GreenSturgeonCHHeadOfTide.shp | 7 | 11/2/2009 | 1/14/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| NOAA_maps | shp | GreenSturgeonCHMarineCoastalZones.shp | 1,625 | 11/2/2009 | 1/14/2010 |
| NOAA_maps | shp | GreenSturgeonCHMarshAreas.shp | 932 | 11/2/2009 | 1/14/2010 |
| NOAA_maps | shp | GreenSturgeonCHStreams.shp | 1,183 | 11/2/2009 | 1/14/2010 |
| NOAA_maps | shp | GreenSturgeonCHTribalExclusions.shp | 39 | 11/2/2009 | 1/14/2010 |
| NOAA_maps | shp | SRKW_FCH_11_14_06_NAD83.shp | 2,129 | 11/15/2006 | 1/14/2010 |
| NOAA_maps | shp | StellarSeaLion_CriticalHabitat_CA.shp | 63 | 4/14/2009 | 1/14/2010 |
| NOAA_maps | TXT | README.TXT | 7 | 1/3/2010 | 1/3/2010 |
| NOAA_maps | TXT | USERAGREEMENT.TXT | 6 | 1/3/2010 | 1/3/2010 |
| SacramentoCounty | dbf | Delta_topo_83_88.dbf | 1,989 | 2/11/2010 | 2/11/2010 |
| SacramentoCounty | shp | Delta_topo_83_88.shp | 453,375 | 2/11/2010 | 2/16/2010 |
| SolidWaste_SwisGIS | txt | SwisGis.txt | 1,230 | 1/3/2010 | 1/12/2010 |
| USACE | dbf | bays_estuaries.dbf | 9 | 1/3/2010 | 1/6/2010 |
| USACE | dbf | CA_LEVEE_CL.dbf | 16,662 | 1/3/2010 | 1/4/2010 |
| USACE | dbf | caalamal.dbf | 27 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | caalamas.dbf | 6,065 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | caalamaw.dbf | 172 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | caalamin.dbf | 32 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | caalampk.dbf | 22 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | caalamr.dbf | 136 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | caalamra.dbf | 1 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | caalamrc.dbf | 2 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | caalams.dbf | 11,617 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | caalamtr.dbf | 1 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | caalamw.dbf | 189 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | caalamwp.dbf | 7 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | caalamx.dbf | 45 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cacontal.dbf | 18 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | cacontas.dbf | 5,851 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cacontaw.dbf | 194 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cacontin.dbf | 20 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | cacontpk.dbf | 13 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | cacontr.dbf | 108 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | cacontra.dbf | 2 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | cacontrc.dbf | 2 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | caconts.dbf | 11,208 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | cacontw.dbf | 214 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | cacontwp.dbf | 9 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | cacontx.dbf | 28 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | cahpn.dbf | 35 | 1/3/2010 | 1/4/2010 |
| USACE | dbf | cahpn.dbf | 35 | 1/3/2010 | 1/5/2010 |
| USACE | dbf | casacral.dbf | 24 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casacras.dbf | 6,176 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casacraw.dbf | 176 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casacrin.dbf | 28 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casacrpk.dbf | 21 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casacrr.dbf | 87 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | casacrra.dbf | 2 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casacrrc.dbf | 3 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casacrs.dbf | 11,830 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | casacrw.dbf | 195 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casacrwp.dbf | 13 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casacrx.dbf | 34 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casanjal.dbf | 5 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casanjas.dbf | 2,875 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casanjaw.dbf | 125 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casanjin.dbf | 13 | 11/28/2006 | 11/28/2006 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | dbf | casanjpk.dbf | 6 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casanjr.dbf | 100 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casanjra.dbf | 1 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casanjrc.dbf | 1 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casanjs.dbf | 5,507 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | casanjtr.dbf | 1 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casanjw.dbf | 137 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casanjwp.dbf | 11 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casanjx.dbf | 26 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casolaal.dbf | 8 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casolaas.dbf | 2,104 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casolaaw.dbf | 181 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casolain.dbf | 8 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casolapk.dbf | 6 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casolar.dbf | 32 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casolarc.dbf | 1 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casolas.dbf | 4,029 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | casolaw.dbf | 200 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casolawp.dbf | 14 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | casolax.dbf | 21 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cayoloal.dbf | 3 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cayoloas.dbf | 1,075 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cayoloaw.dbf | 83 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cayoloin.dbf | 4 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cayolopk.dbf | 3 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cayolor.dbf | 26 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cayolos.dbf | 2,057 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | cayolow.dbf | 92 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cayolowp.dbf | 5 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | cayolox.dbf | 12 | 11/28/2006 | 11/28/2006 |
| USACE | dbf | CDL_levee_centerline.dbf | 24,486 | 1/3/2010 | 1/4/2010 |
| USACE | dbf | channel-sj.dbf | 2 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | Channel.dbf | 1 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | ChannelAlignmentExisting.dbf | 12 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | ChannelAlignmentProposed.dbf | 17 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | cities.dbf | 30 | 1/3/2010 | 1/14/2010 |
| USACE | dbf | Coastal_bays_names.dbf | 66 | 1/3/2010 | 1/6/2010 |
| USACE | dbf | combinedSoil.dbf | 1,354 | 1/3/2010 | 1/5/2010 |
| USACE | dbf | County Line.dbf | 46 | 1/14/2010 | 1/14/2010 |
| USACE | dbf | CurrentUplandDisposalPLG.dbf | 1 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | delta_ftx10_10ft.dbf | 494 | 2/16/2010 | 3/12/2010 |
| USACE | dbf | delta_ftx10_5ft.dbf | 858 | 2/16/2010 | 3/12/2010 |
| USACE | dbf | DeltaLevee_centerlines.dbf | 34 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | Disposal-polys.dbf | 2 | 2/19/2010 | 2/19/2010 |
| USACE | dbf | Disposal-polys.dbf | 2 | 1/3/2010 | 1/6/2010 |
| USACE | dbf | DWR_Mainten_Area.dbf | 6 | 1/3/2010 | 1/6/2010 |
| USACE | dbf | Groundwater Basin.dbf | 294 | 1/3/2010 | 1/5/2010 |
| USACE | dbf | hcaalamx.dbf | 1,385 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | hcacontx.dbf | 979 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | hcasacrx.dbf | 1,019 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | hcasanjx.dbf | 650 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | hcasolax.dbf | 579 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | hcayolox.dbf | 321 | 11/28/2006 | 1/14/2010 |
| USACE | dbf | Levee.dbf | 949 | 1/3/2010 | 1/5/2010 |
| USACE | dbf | naip_1-1_1n_ca001_2005_1.dbf | 9 | 1/3/2010 | 1/3/2010 |
| USACE | dbf | naip_1-1_1n_ca013_2005_1.dbf | 9 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | dbf | naip_1-1_1n_ca095_2005_1.dbf | 10 | 1/3/2010 | 1/3/2010 |
| USACE | dbf | NHDArea.dbf | 148 | 2/19/2010 | 2/19/2010 |
| USACE | dbf | nwibay.dbf | 776 | 1/3/2010 | 3/10/2010 |
| USACE | dbf | nwidelta.dbf | 501 | 1/14/2010 | 3/5/2010 |
| USACE | dbf | OCS_Coastline.dbf | 2,309 | 2/19/2010 | 2/19/2010 |
| USACE | dbf | Other_Properties.dbf | 1 | 1/3/2010 | 1/3/2010 |
| USACE | dbf | picture.dbf | 157 | 1/3/2010 | 1/3/2010 |
| USACE | dbf | picture.dbf | 92 | 1/3/2010 | 1/3/2010 |
| USACE | dbf | PLA_CDD_GPLanduseElement_0206.dbf | 71 | 1/3/2010 | 1/3/2010 |
| USACE | dbf | PLA_CDD_UrbanLimits_0105.dbf | 9 | 1/3/2010 | 1/3/2010 |
| USACE | dbf | PLA_CDD_Zoning_0206.dbf | 302 | 1/3/2010 | 1/3/2010 |
| USACE | dbf | placement_area_20091214.dbf | 199 | 1/3/2010 | 2/24/2010 |
| USACE | dbf | placement_area_20091216.dbf | 203 | 1/5/2010 | 1/15/2010 |
| USACE | dbf | placement_area_20100219.dbf | 217 | 2/24/2010 | 2/26/2010 |
| USACE | dbf | precipa.dbf | 35 | 1/3/2010 | 1/5/2010 |
| USACE | dbf | Reclamation_District.dbf | 26 | 1/3/2010 | 1/5/2010 |
| USACE | dbf | Regional_Water_Quality_Control_Boundary.dbf | 2 | 1/3/2010 | 1/5/2010 |
| USACE | dbf | restoration_projects.dbf | 8 | 1/3/2010 | 1/5/2010 |
| USACE | dbf | restoration_projects.dbf | 8 | 1/3/2010 | 1/4/2010 |
| USACE | dbf | Sac_Streams.dbf | 7,958 | 1/3/2010 | 1/7/2010 |
| USACE | dbf | SacChanCLReach.dbf | 6 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | SacChanDisposalPolys.dbf | 5 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | SacMileMarksIncNegs.dbf | 49 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | SCDlakes.dbf | 357 | 1/3/2010 | 1/7/2010 |
| USACE | dbf | SDWSCVegetation.dbf | 12 | 1/3/2010 | 1/6/2010 |
| USACE | dbf | SJ-5miles.dbf | 3 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | SJ-lights _5-41.dbf | 5 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | SJ-lights_3-25.dbf | 6 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | SJ-mile.dbf | 23 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | SJ-pileings.dbf | 2 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | SJ-station.dbf | 81 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | SPK_NLD_LeveeSEGMENT_start_end.dbf | 197 | 1/3/2010 | 1/3/2010 |
| USACE | dbf | SPK_NLD_LeveeSEGMENTS.dbf | 531 | 1/3/2010 | 1/4/2010 |
| USACE | dbf | SPN_placement_areas_inprogress.dbf | 197 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | State Water Project Waterway.dbf | 10 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | Stockton_DWSC_Sites_modified.dbf | 20 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | streams.dbf | 57,931 | 1/3/2010 | 1/7/2010 |
| USACE | dbf | target_parcels.dbf | 13 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | USACEfederal_Lands_(areas).dbf | 107 | 1/3/2010 | 2/16/2010 |
| USACE | dbf | XYsacram_w.dbf | 3,411 | 1/3/2010 | 2/16/2010 |
| USACE | dwg | Coversheet_Indexes_recover.dwg | 522 | 1/3/2010 | 1/3/2010 |
| USACE | dwg | Coversheet_Indexes.dwg | 652 | 1/3/2010 | 1/3/2010 |
| USACE | dwg | MstrPhoto_recover.dwg | 7 | 1/3/2010 | 1/3/2010 |
| USACE | dwg | MstrPhoto.dwg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | dwg | MstrProp_recover.dwg | 201 | 1/3/2010 | 1/3/2010 |
| USACE | dwg | MstrProp.dwg | 940 | 1/3/2010 | 1/3/2010 |
| USACE | dwg | ROEMap.dwg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | dwg | Sac Ship Est.dwg | 31 | 1/3/2010 | 1/3/2010 |
| USACE | freel | a00000006.freelist | 4 | 1/3/2010 | 1/3/2010 |
| USACE | freel | a0000001c.freelist | 13 | 1/3/2010 | 1/5/2010 |
| USACE | G: | README | 2 | 1/3/2010 | 1/3/2010 |
| USACE | G: | README | 2 | 1/3/2010 | 1/3/2010 |
| USACE | jp2 | n38121a6.jp2 | 21,026 | 2/19/2010 | 2/19/2010 |
| USACE | jp2 | n38121a7.jp2 | 21,026 | 2/19/2010 | 2/19/2010 |
| USACE | jp2 | n38121b6.jp2 | 20,989 | 2/19/2010 | 2/19/2010 |
| USACE | jp2 | n38121c5.jp2 | 20,953 | 2/19/2010 | 2/19/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jp2 | n38121c6.jp2 | 20,935 | 2/19/2010 | 2/19/2010 |
| USACE | jp2 | n38121d5.jp2 | 20,917 | 2/19/2010 | 2/19/2010 |
| USACE | jp2 | n38121d6.jp2 | 20,917 | 2/19/2010 | 2/19/2010 |
| USACE | jp2 | n38121e5.jp2 | 20,880 | 2/19/2010 | 2/19/2010 |
| USACE | jpg | DSC01601.jpg | 2,896 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01603.jpg | 3,097 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01604.jpg | 3,078 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01612.jpg | 2,875 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01616.jpg | 2,855 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01623.jpg | 2,263 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01625.jpg | 3,040 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01628.jpg | 3,069 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01629.jpg | 3,244 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01633.jpg | 3,067 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01635.jpg | 3,173 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01637.jpg | 3,092 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01639.jpg | 3,095 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01642.jpg | 2,961 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01643.jpg | 2,938 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01646.jpg | 2,963 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01647.jpg | 3,073 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01648.jpg | 3,103 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01653.jpg | 3,157 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01654.jpg | 3,302 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01655.jpg | 3,110 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01657.jpg | 3,101 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01659.jpg | 3,141 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01662.jpg | 3,193 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01664.jpg | 2,819 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01666.jpg | 3,308 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01668.jpg | 3,251 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01674.jpg | 3,375 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01675.jpg | 2,876 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01681.jpg | 3,258 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01682.jpg | 3,112 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01698.jpg | 3,012 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01706.jpg | 3,184 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01709.jpg | 3,186 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01726.jpg | 3,190 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01730.jpg | 2,754 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01732.jpg | 3,294 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01734.jpg | 3,134 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01741.jpg | 3,147 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01743.jpg | 3,212 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01746.jpg | 3,097 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01748.jpg | 3,152 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01750.jpg | 3,229 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01755.jpg | 3,302 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01757.jpg | 3,153 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01760.jpg | 3,015 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01762.jpg | 3,376 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01766.jpg | 2,898 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01770.jpg | 3,122 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01773.jpg | 3,002 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01775.jpg | 3,048 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01778.jpg | 2,983 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | DSC01783.jpg | 3,171 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01785.jpg | 3,237 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01787.jpg | 3,138 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | DSC01789.jpg | 3,314 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | overview_map1.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | overview_map1.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | overview_map2.jpg | 112 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | overview_map2.jpg | 113 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0001_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0001_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0001_small.jpg | 32 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0001_tag.jpg | 128 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0001.JPG | 374 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0002_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0002_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0002_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0002_tag.jpg | 86 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0002.JPG | 399 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0003_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0003_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0003_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0003_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0003.JPG | 367 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0004_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0004_tag.jpg | 74 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0004.JPG | 382 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0005_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0005_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0005_small.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0005_tag.jpg | 142 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0005.JPG | 369 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0006_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0006_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0006_small.jpg | 25 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0006_tag.jpg | 137 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0006.JPG | 361 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0007_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0007_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0007_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0007_tag.jpg | 72 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0007.JPG | 359 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0008_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0008_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0008_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0008_tag.jpg | 85 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0008.JPG | 398 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0009_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0009_map2.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0009_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0009_tag.jpg | 80 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0009.JPG | 359 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0010_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0010_map2.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0010_small.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0010_tag.jpg | 115 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0010.JPG | 368 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0011_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0011_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0011_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0011_tag.jpg | 96 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0011.JPG | 325 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0012_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0012_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0012_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0012_tag.jpg | 87 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0012.JPG | 390 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0013_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0013_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0013_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0013_tag.jpg | 84 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0013.JPG | 383 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0014_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0014_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0014_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0014_small.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0014_tag.jpg | 71 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0014_tag.jpg | 114 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0014.JPG | 381 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0014.JPG | 350 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0015_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0015_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0015_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0015_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0015_tag.jpg | 82 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0015_tag.jpg | 78 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0015.JPG | 387 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0015.JPG | 379 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0016_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0016_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0016_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0016_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0016_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0016_small.jpg | 25 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0016_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0016_tag.jpg | 103 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0016.JPG | 380 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0016.JPG | 372 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0017_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0017_map1.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0017_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0017_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0017_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0017_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0017_tag.jpg | 68 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0017_tag.jpg | 72 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0017.JPG | 401 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0017.JPG | 395 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0018_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0018_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0018_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0018_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0018_small.jpg | 27 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0018_small.jpg | 25 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0018_tag.jpg | 67 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0018_tag.jpg | 109 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0018.JPG | 402 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0018.JPG | 361 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0019_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0019_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0019_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0019_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0019_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0019_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0019_tag.jpg | 65 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0019_tag.jpg | 123 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0019.JPG | 390 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0019.JPG | 397 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0020_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0020_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0020_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0020_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0020_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0020_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0020_tag.jpg | 59 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0020_tag.jpg | 76 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0020.JPG | 356 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0020.JPG | 384 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0021_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0021_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0021_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0021_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0021_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0021_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0021_tag.jpg | 75 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0021_tag.jpg | 81 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0021.JPG | 366 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0021.JPG | 369 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0022_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0022_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0022_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0022_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0022_tag.jpg | 56 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0022_tag.jpg | 68 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0022.JPG | 403 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0022.JPG | 384 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0023_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0023_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0023_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0023_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0023_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0023_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0023_tag.jpg | 71 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0023_tag.jpg | 82 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0023.JPG | 395 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0023.JPG | 396 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0024_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0024_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0024_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0024_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0024_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0024_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0024_tag.jpg | 64 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0024_tag.jpg | 76 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0024.JPG | 381 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0024.JPG | 365 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0025_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0025_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0025_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0025_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0025_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0025_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0025_tag.jpg | 66 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0025_tag.jpg | 78 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0025.JPG | 390 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0025.JPG | 345 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0026_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0026_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0026_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0026_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0026_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0026_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0026_tag.jpg | 64 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0026_tag.jpg | 76 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0026.JPG | 375 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0026.JPG | 345 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0027_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0027_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0027_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0027_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0027_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0027_small.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0027_tag.jpg | 61 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0027_tag.jpg | 151 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0027.JPG | 348 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0027.JPG | 349 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0028_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0028_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0028_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0028_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0028_small.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0028_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0028_tag.jpg | 80 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0028_tag.jpg | 79 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0028.JPG | 364 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0028.JPG | 376 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0029_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0029_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0029_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0029_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0029_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0029_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0029_tag.jpg | 54 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0029_tag.jpg | 102 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0029.JPG | 393 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | JPG | RIMG0029.JPG | 365 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0030_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0030_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0030_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0030_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0030_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0030_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0030_tag.jpg | 64 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0030_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0030.JPG | 390 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0030.JPG | 376 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0031_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0031_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0031_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0031_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0031_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0031_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0031_tag.jpg | 58 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0031_tag.jpg | 79 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0031.JPG | 387 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0031.JPG | 351 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0032_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0032_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0032_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0032_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0032_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0032_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0032_tag.jpg | 60 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0032_tag.jpg | 77 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0032.JPG | 382 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0032.JPG | 332 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0033_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0033_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0033_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0033_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0033_tag.jpg | 61 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0033_tag.jpg | 106 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0033.JPG | 366 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0033.JPG | 352 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0034_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0034_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0034_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0034_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0034_small.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0034_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0034_tag.jpg | 64 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0034_tag.jpg | 71 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0034.JPG | 343 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0034.JPG | 357 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0035_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0035_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0035_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0035_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0035_small.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0035_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0035_tag.jpg | 60 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0035_tag.jpg | 78 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0035.JPG | 325 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0035.JPG | 374 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0036_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0036_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0036_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0036_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0036_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0036_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0036_tag.jpg | 52 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0036_tag.jpg | 78 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0036.JPG | 396 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0036.JPG | 390 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0037_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0037_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0037_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0037_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0037_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0037_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0037_tag.jpg | 71 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0037_tag.jpg | 74 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0037.JPG | 359 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0037.JPG | 348 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0038_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0038_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0038_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0038_small.jpg | 25 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0038_tag.jpg | 60 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0038_tag.jpg | 95 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0038.JPG | 351 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0038.JPG | 396 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0039_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0039_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0039_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0039_small.jpg | 31 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0039_tag.jpg | 54 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0039_tag.jpg | 113 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0039.JPG | 387 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0039.JPG | 384 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0040_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0040_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0040_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0040_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0040_small.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0040_small.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0040_tag.jpg | 69 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0040_tag.jpg | 85 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0040.JPG | 319 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0040.JPG | 377 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0041_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0041_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0041_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0041_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0041_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0041_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0041_tag.jpg | 65 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0041_tag.jpg | 105 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0041.JPG | 357 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0041.JPG | 390 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0042_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0042_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0042_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0042_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0042_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0042_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0042_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0042_tag.jpg | 75 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0042.JPG | 345 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0042.JPG | 398 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0043_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0043_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0043_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0043_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0043_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0043_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0043_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0043_tag.jpg | 63 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0043.JPG | 341 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0043.JPG | 365 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0044_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0044_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0044_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0044_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0044_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0044_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0044_tag.jpg | 53 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0044_tag.jpg | 78 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0044.JPG | 394 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0044.JPG | 382 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0045_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0045_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0045_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0045_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0045_tag.jpg | 65 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0045_tag.jpg | 74 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0045.JPG | 394 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0045.JPG | 378 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0046_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0046_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0046_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0046_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0046_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0046_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0046_tag.jpg | 69 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0046_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0046.JPG | 383 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0046.JPG | 334 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0047_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0047_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0047_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0047_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0047_small.jpg | 29 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0047_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0047_tag.jpg | 67 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0047_tag.jpg | 75 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0047.JPG | 396 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0047.JPG | 368 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0048_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0048_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0048_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0048_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0048_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0048_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0048_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0048_tag.jpg | 59 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0048.JPG | 337 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0048.JPG | 393 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0049_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0049_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0049_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0049_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0049_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0049_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0049_tag.jpg | 55 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0049_tag.jpg | 58 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0049.JPG | 391 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0049.JPG | 399 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0050_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0050_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0050_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0050_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0050_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0050_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0050_tag.jpg | 64 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0050_tag.jpg | 95 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0050.JPG | 382 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0050.JPG | 404 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0051_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0051_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0051_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0051_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0051_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0051_tag.jpg | 87 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0051.JPG | 361 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0051.JPG | 388 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0052_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0052_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0052_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0052_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0052_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0052_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0052_tag.jpg | 58 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0052_tag.jpg | 87 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0052.JPG | 359 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0052.JPG | 364 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0053_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0053_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0053_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0053_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0053_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0053_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0053_tag.jpg | 54 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0053_tag.jpg | 99 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0053.JPG | 391 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0053.JPG | 350 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0054_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0054_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0054_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0054_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0054_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0054_small.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0054_tag.jpg | 81 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0054_tag.jpg | 99 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0054.JPG | 354 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0054.JPG | 366 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0055_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0055_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0055_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0055_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0055_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0055_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0055_tag.jpg | 64 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0055_tag.jpg | 63 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0055.JPG | 372 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0055.JPG | 397 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0056_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0056_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0056_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0056_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0056_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0056_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0056_tag.jpg | 75 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0056_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0056.JPG | 362 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0056.JPG | 404 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0057_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0057_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0057_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0057_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0057_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0057_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0057_tag.jpg | 74 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0057_tag.jpg | 74 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0057.JPG | 365 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0057.JPG | 404 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0058_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0058_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0058_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0058_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0058_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0058_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0058_tag.jpg | 80 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0058_tag.jpg | 74 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0058.JPG | 379 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | JPG | RIMG0058.JPG | 401 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0059_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0059_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0059_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0059_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0059_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0059_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0059_tag.jpg | 68 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0059_tag.jpg | 75 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0059.JPG | 387 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0059.JPG | 396 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0060_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0060_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0060_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0060_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0060_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0060_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0060_tag.jpg | 67 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0060_tag.jpg | 69 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0060.JPG | 363 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0060.JPG | 371 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0061_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0061_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0061_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0061_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0061_tag.jpg | 68 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0061_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0061.JPG | 398 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0061.JPG | 385 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0062_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0062_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0062_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0062_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0062_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0062_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0062_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0062_tag.jpg | 69 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0062.JPG | 388 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0062.JPG | 337 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0063_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0063_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0063_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0063_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0063_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0063_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0063_tag.jpg | 70 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0063_tag.jpg | 65 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0063.JPG | 371 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0063.JPG | 361 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0064_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0064_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0064_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0064_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0064_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0064_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0064_tag.jpg | 72 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0064_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0064.JPG | 404 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0064.JPG | 390 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0065_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0065_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0065_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0065_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0065_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0065_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0065_tag.jpg | 53 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0065_tag.jpg | 79 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0065.JPG | 379 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0065.JPG | 404 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0066_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0066_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0066_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0066_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0066_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0066_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0066_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0066_tag.jpg | 89 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0066.JPG | 371 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0066.JPG | 372 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0067_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0067_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0067_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0067_map2.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0067_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0067_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0067_tag.jpg | 57 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0067_tag.jpg | 71 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0067.JPG | 345 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0067.JPG | 358 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0068_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0068_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0068_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0068_map2.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0068_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0068_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0068_tag.jpg | 51 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0068_tag.jpg | 66 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0068.JPG | 395 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0068.JPG | 324 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0069_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0069_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0069_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0069_map2.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0069_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0069_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0069_tag.jpg | 51 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0069_tag.jpg | 77 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0069.JPG | 382 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0069.JPG | 356 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0070_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0070_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0070_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0070_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0070_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0070_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0070_tag.jpg | 50 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0070_tag.jpg | 70 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0070.JPG | 363 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0070.JPG | 368 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0071_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0071_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0071_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0071_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0071_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0071_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0071_tag.jpg | 49 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0071_tag.jpg | 68 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0071.JPG | 350 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0071.JPG | 380 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0072_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0072_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0072_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0072_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0072_tag.jpg | 45 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0072_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0072.JPG | 358 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0072.JPG | 357 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0073_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0073_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0073_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0073_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0073_small.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0073_small.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0073_tag.jpg | 59 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0073_tag.jpg | 87 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0073.JPG | 358 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0073.JPG | 371 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0074_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0074_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0074_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0074_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0074_small.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0074_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0074_tag.jpg | 45 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0074_tag.jpg | 75 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0074.JPG | 351 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0074.JPG | 401 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0075_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0075_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0075_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0075_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0075_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0075_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0075_tag.jpg | 49 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0075_tag.jpg | 78 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0075.JPG | 399 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0075.JPG | 361 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0076_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0076_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0076_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0076_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0076_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0076_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0076_tag.jpg | 54 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0076_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0076.JPG | 392 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0076.JPG | 335 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0077_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0077_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0077_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0077_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0077_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0077_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0077_tag.jpg | 50 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0077_tag.jpg | 64 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0077.JPG | 359 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0077.JPG | 403 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0078_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0078_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0078_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0078_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0078_small.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0078_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0078_tag.jpg | 61 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0078_tag.jpg | 77 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0078.JPG | 362 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0078.JPG | 382 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0079_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0079_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0079_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0079_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0079_tag.jpg | 54 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0079_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0079.JPG | 394 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0079.JPG | 380 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0080_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0080_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0080_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0080_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0080_tag.jpg | 49 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0080_tag.jpg | 94 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0080.JPG | 376 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0080.JPG | 388 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0081_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0081_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0081_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0081_small.jpg | 31 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0081_tag.jpg | 51 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0081_tag.jpg | 98 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0081.JPG | 401 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0081.JPG | 365 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0082_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0082_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0082_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0082_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0082_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0082_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0082_tag.jpg | 58 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0082_tag.jpg | 87 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0082.JPG | 395 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0082.JPG | 390 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0083_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0083_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0083_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0083_map2.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0083_small.jpg | 25 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0083_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0083_tag.jpg | 59 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0083_tag.jpg | 77 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0083.JPG | 397 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0083.JPG | 401 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0084_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0084_map1.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0084_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0084_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0084_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0084_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0084_tag.jpg | 52 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0084_tag.jpg | 86 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0084.JPG | 389 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0084.JPG | 398 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0085_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0085_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0085_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0085_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0085_tag.jpg | 48 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0085_tag.jpg | 79 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0085.JPG | 387 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0085.JPG | 337 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0086_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0086_map1.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0086_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0086_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0086_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0086_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0086_tag.jpg | 51 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0086_tag.jpg | 71 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0086.JPG | 375 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0086.JPG | 359 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0087_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0087_map1.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0087_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0087_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0087_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0087_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0087_tag.jpg | 51 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0087_tag.jpg | 80 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0087.JPG | 399 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0087.JPG | 395 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0088_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0088_map1.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0088_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0088_map2.jpg | 25 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0088_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0088_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0088_tag.jpg | 58 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0088_tag.jpg | 67 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0088.JPG | 399 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0088.JPG | 347 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0089_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0089_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0089_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0089_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0089_tag.jpg | 47 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0089_tag.jpg | 86 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0089.JPG | 398 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0089.JPG | 376 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0090_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0090_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0090_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0090_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0090_tag.jpg | 46 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0090_tag.jpg | 90 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0090.JPG | 403 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0090.JPG | 374 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0091_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0091_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0091_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0091_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0091_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0091_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0091_tag.jpg | 52 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0091_tag.jpg | 94 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0091.JPG | 388 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0091.JPG | 401 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0092_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0092_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0092_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0092_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0092_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0092_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0092_tag.jpg | 52 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0092_tag.jpg | 88 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0092.JPG | 381 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0092.JPG | 369 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0093_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0093_map2.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0093_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0093_small.jpg | 25 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0093_tag.jpg | 48 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0093_tag.jpg | 105 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0093.JPG | 377 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0093.JPG | 359 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0094_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0094_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0094_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0094_map2.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0094_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0094_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0094_tag.jpg | 51 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0094_tag.jpg | 74 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0094.JPG | 374 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0094.JPG | 397 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0095_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0095_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0095_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0095_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0095_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0095_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0095_tag.jpg | 50 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0095_tag.jpg | 81 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0095.JPG | 385 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0095.JPG | 381 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0096_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0096_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0096_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0096_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0096_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0096_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0096_tag.jpg | 53 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0096_tag.jpg | 60 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0096.JPG | 398 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0096.JPG | 402 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0097_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0097_map2.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0097_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0097_small.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0097_tag.jpg | 54 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0097_tag.jpg | 145 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0097.JPG | 351 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0097.JPG | 324 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0098_map1.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0098_map2.jpg | 25 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0098_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0098_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0098_tag.jpg | 47 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0098_tag.jpg | 79 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0098.JPG | 399 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0098.JPG | 381 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0099_map1.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0099_map2.jpg | 25 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0099_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0099_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0099_tag.jpg | 50 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0099_tag.jpg | 80 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0099.JPG | 382 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0099.JPG | 389 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0100_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0100_map1.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0100_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0100_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0100_small.jpg | 28 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0100_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0100_tag.jpg | 49 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0100_tag.jpg | 86 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0100.JPG | 355 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0100.JPG | 384 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0101_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0101_map1.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0101_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0101_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0101_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0101_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0101_tag.jpg | 47 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0101_tag.jpg | 78 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0101.JPG | 351 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0101.JPG | 391 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0102_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0102_map1.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0102_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0102_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0102_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0102_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0102_tag.jpg | 52 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0102_tag.jpg | 70 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0102.JPG | 356 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0102.JPG | 338 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0103_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0103_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0103_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0103_tag.jpg | 66 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0103.JPG | 398 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0104_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0104_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0104_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0104_tag.jpg | 64 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0104.JPG | 395 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0105_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0105_tag.jpg | 66 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0105.JPG | 365 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0106_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0106_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0106_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0106_tag.jpg | 55 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0106.JPG | 391 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0107_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0107_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0107_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0107_tag.jpg | 75 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0107.JPG | 367 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0108_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0108_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0108_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0108_tag.jpg | 61 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0108.JPG | 373 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0109_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0109_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0109_small.jpg | 28 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0109_tag.jpg | 56 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0109.JPG | 389 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0110_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0110_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0110_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0110_tag.jpg | 70 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0110.JPG | 397 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0111_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0111_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0111_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0111_tag.jpg | 67 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0111.JPG | 387 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0112_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0112_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0112_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0112_tag.jpg | 59 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0112.JPG | 399 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0113_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0113_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0113_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0113_tag.jpg | 70 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0113.JPG | 394 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0114_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0114_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0114_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0114_tag.jpg | 55 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0114.JPG | 397 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0115_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0115_tag.jpg | 54 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0115.JPG | 388 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0116_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0116_tag.jpg | 63 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0116.JPG | 382 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0117_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0117_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0117_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0117_tag.jpg | 79 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0117.JPG | 373 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0118_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0118_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0118_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0118_tag.jpg | 66 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0118.JPG | 349 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0119_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0119_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0119_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0119_tag.jpg | 76 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0119.JPG | 392 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0120_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0120_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0120_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0120_tag.jpg | 61 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0120.JPG | 359 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0121_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0121_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0121_small.jpg | 29 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0121_tag.jpg | 70 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0121.JPG | 354 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0122_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0122_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0122_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0122_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0122.JPG | 395 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0123_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0123_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0123_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0123_tag.jpg | 65 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0123.JPG | 400 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0124_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0124_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0124_small.jpg | 25 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0124_tag.jpg | 63 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0124.JPG | 390 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0125_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0125_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0125_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0125_tag.jpg | 82 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0125.JPG | 378 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0126_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0126_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0126_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0126_tag.jpg | 60 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0126.JPG | 404 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0127_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0127_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0127_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0127_tag.jpg | 52 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0127.JPG | 356 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0128_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0128_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0128_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0128_tag.jpg | 53 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0128.JPG | 363 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0129_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0129_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0129_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0129_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0129.JPG | 388 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0130_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0130_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0130_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0130_tag.jpg | 59 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0130.JPG | 394 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0131_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0131_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0131_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0131_tag.jpg | 52 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0131.JPG | 384 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0132_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0132_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0132_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0132_tag.jpg | 57 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | JPG | RIMG0132.JPG | 391 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0133_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0133_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0133_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0133_tag.jpg | 55 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0133.JPG | 389 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0134_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0134_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0134_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0134_tag.jpg | 55 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0134.JPG | 391 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0135_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0135_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0135_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0135_tag.jpg | 57 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0135.JPG | 403 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0136_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0136_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0136_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0136_tag.jpg | 56 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0136.JPG | 371 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0137_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0137_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0137_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0137_tag.jpg | 56 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0137.JPG | 379 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0138_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0138_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0138_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0138_tag.jpg | 71 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0138.JPG | 398 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0139_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0139_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0139_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0139_tag.jpg | 57 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0139.JPG | 395 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0140_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0140_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0140_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0140_tag.jpg | 55 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0140.JPG | 384 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0141_map1.jpg | 14 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0141_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0141_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0141_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0141.JPG | 402 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0142_map1.jpg | 14 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0142_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0142_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0142_tag.jpg | 52 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0142.JPG | 402 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0143_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0143_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0143_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0143_tag.jpg | 49 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0143.JPG | 396 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0144_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0144_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0144_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0144_tag.jpg | 79 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0144.JPG | 362 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0145_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0145_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0145_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0145_tag.jpg | 50 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0145.JPG | 402 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0146_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0146_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0146_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0146_tag.jpg | 50 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0146.JPG | 392 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0147_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0147_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0147_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0147_tag.jpg | 67 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0147.JPG | 383 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0148_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0148_map2.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0148_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0148_tag.jpg | 51 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0148.JPG | 383 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0149_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0149_tag.jpg | 61 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0149.JPG | 348 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0150_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0150_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0150_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0150_tag.jpg | 72 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0150.JPG | 376 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0151_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0151_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0151_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0151_tag.jpg | 75 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0151.JPG | 401 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0152_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0152_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0152_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0152_tag.jpg | 61 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0152.JPG | 389 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0153_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0153_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0153_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0153_tag.jpg | 66 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0153.JPG | 376 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0154_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0154_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0154_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0154_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0154.JPG | 391 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0155_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0155_map2.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0155_small.jpg | 26 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0155_tag.jpg | 66 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0155.JPG | 377 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0156_map1.jpg | 14 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0156_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0156_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0156_tag.jpg | 67 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0156.JPG | 373 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0157_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0157_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0157_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0157_tag.jpg | 68 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0157.JPG | 355 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0158_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0158_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0158_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0158_tag.jpg | 69 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0158.JPG | 364 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0159_small.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0159_tag.jpg | 66 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0159.JPG | 345 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0160_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0160_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0160_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0160_tag.jpg | 83 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0160.JPG | 376 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0161_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0161_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0161_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0161_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0161.JPG | 368 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0162_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0162_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0162_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0162_tag.jpg | 77 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0162.JPG | 356 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0163_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0163_map2.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0163_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0163_tag.jpg | 54 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0163.JPG | 394 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0164_map1.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0164_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0164_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0164_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0164.JPG | 401 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0165_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0165_map2.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0165_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0165_tag.jpg | 72 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0165.JPG | 395 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0166_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0166_map2.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0166_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0166_tag.jpg | 58 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0166.JPG | 377 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0167_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | jpg | RIMG0167_map2.jpg | 22 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0167_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0167_tag.jpg | 58 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0167.JPG | 384 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0168_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0168_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0168_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0168_tag.jpg | 55 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0168.JPG | 349 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0169_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0169_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0169_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0169_tag.jpg | 78 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0169.JPG | 371 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0170_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0170_tag.jpg | 48 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0170.JPG | 387 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0171_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0171_map2.jpg | 23 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0171_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0171_tag.jpg | 59 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0171.JPG | 384 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0172_map1.jpg | 17 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0172_map2.jpg | 24 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0172_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0172_tag.jpg | 80 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0172.JPG | 392 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0173_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0173_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0173_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0173_tag.jpg | 48 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0173.JPG | 377 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0174_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0174_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0174_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0174_tag.jpg | 60 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0174.JPG | 401 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0175_map1.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0175_map2.jpg | 21 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0175_small.jpg | 27 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0175_tag.jpg | 60 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0175.JPG | 382 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0176_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0176_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0176_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0176_tag.jpg | 71 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0176.JPG | 399 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0177_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0177_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0177_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0177_tag.jpg | 68 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0177.JPG | 381 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0178_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0178_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0178_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0178_tag.jpg | 73 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | JPG | RIMG0178.JPG | 378 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0179_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0179_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0179_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0179_tag.jpg | 74 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0179.JPG | 388 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0180_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0180_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0180_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0180_tag.jpg | 75 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0180.JPG | 401 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0181_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0181_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0181_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0181_tag.jpg | 72 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0181.JPG | 375 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0182_map1.jpg | 18 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0182_map2.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0182_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0182_tag.jpg | 66 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0182.JPG | 400 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0183_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0183_map2.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0183_small.jpg | 30 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0183_tag.jpg | 74 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0183.JPG | 404 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0184_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0184_map2.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0184_small.jpg | 28 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0184_tag.jpg | 68 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0184.JPG | 382 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0185_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0185_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0185_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0185_tag.jpg | 63 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0185.JPG | 332 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0186_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0186_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0186_small.jpg | 26 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0186_tag.jpg | 63 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0186.JPG | 371 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0187_map1.jpg | 20 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0187_map2.jpg | 16 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0187_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0187_tag.jpg | 71 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0187.JPG | 386 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0188_map1.jpg | 19 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0188_map2.jpg | 15 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0188_small.jpg | 29 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | RIMG0188_tag.jpg | 62 | 1/3/2010 | 1/3/2010 |
| USACE | JPG | RIMG0188.JPG | 383 | 1/3/2010 | 1/3/2010 |
| USACE | jpg | talogo2006forHTML.jpg | 13 | 1/6/2010 | 1/6/2010 |
| USACE | nit | arc0006.nit | 3 | 2/19/2010 | 2/19/2010 |
| USACE | nit | arc0007.nit | 1 | 2/19/2010 | 2/19/2010 |
| USACE | nit | arc0008.nit | 1 | 2/19/2010 | 2/19/2010 |
| USACE | nit | arc0019.nit | 3 | 2/19/2010 | 2/19/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | nit | arc0020.nit | 1 | 2/19/2010 | 2/19/2010 |
| USACE | nit | arc0021.nit | 1 | 2/19/2010 | 2/19/2010 |
| USACE | pdf | Abbreviations for Street Designators_07.pdf | 239 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | AddressPoints_9_07.pdf | 675 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | BrandIcon2007_1.pdf | 132 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | CBSA40x_07.pdf | 455 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | ccqmap.pdf | 9,757 | 1/3/2010 | 1/3/2010 |
| USACE | pdf | Cen90x_07.pdf | 711 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | CityGuide2006.pdf | 153 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | Crt15_07.pdf | 444 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | D200017x_07.pdf | 1,490 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | DATAINST_07.pdf | 258 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | Ddisp9_07.pdf | 773 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | Delta_DisposalSites.pdf | 337 | 1/3/2010 | 1/5/2010 |
| USACE | pdf | Dma23_07.pdf | 264 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | DSC01601.pdf | 2,907 | 1/3/2010 | 1/3/2010 |
| USACE | pdf | Dynamap Definitions and Statistics_07.pdf | 256 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | FCC_to_Speed_NA_07.pdf | 234 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | Final_Disp_Site_Report.pdf | 58,919 | 1/3/2010 | 1/3/2010 |
| USACE | pdf | GENF File_07.pdf | 241 | 1/6/2010 | 3/12/2010 |
| USACE | pdf | Geocode2007.pdf | 373 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | Honker Bay Crossing.pdf | 442 | 1/3/2010 | 1/3/2010 |
| USACE | pdf | Logistics_07.pdf | 1,465 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | metadata_07.pdf | 235 | 1/6/2010 | 1/27/2010 |
| USACE | pdf | mf2403f.pdf | 7,857 | 1/3/2010 | 1/3/2010 |
| USACE | pdf | Munibnd9x_07.pdf | 444 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | NWIwetlandsclassif.pdf | 6,043 | 1/3/2010 | 1/3/2010 |
| USACE | pdf | POI2007.pdf | 188 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | POICodesAndNames_07.pdf | 598 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | ProvinceandTerritories_CA_07.pdf | 216 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | refdocs_07.pdf | 95 | 1/6/2010 | 3/12/2010 |
| USACE | pdf | Routing90_07.pdf | 1,427 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | San Francisco Bay to Stockton Phase 3 (John F. | 46,256 | 1/3/2010 | 1/3/2010 |
| USACE | pdf | San Francisco Bay to Stockton Phase 3 (John F. | 33,885 | 1/3/2010 | 1/3/2010 |
| USACE | pdf | San Francisco Bay to Stockton Phase 3 (John F. | 46,798 | 1/3/2010 | 1/3/2010 |
| USACE | pdf | San Francisco Bay to Stockton Phase 3 (John F. | 62,881 | 1/3/2010 | 1/3/2010 |
| USACE | pdf | San Francisco Bay to Stockton, John F.Baldwin | 20,810 | 1/3/2010 | 1/3/2010 |
| USACE | pdf | Start_07.pdf | 28 | 1/6/2010 | 3/12/2010 |
| USACE | pdf | TA FCC List_NA_07.pdf | 236 | 1/6/2010 | 3/12/2010 |
| USACE | pdf | TAAbbrevCanada_07.pdf | 223 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | Telcom11_07.pdf | 872 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | TELEATLAS_elec_order_07.pdf | 47 | 1/6/2010 | 3/12/2010 |
| USACE | pdf | timedomainsyntax_07.pdf | 1,053 | 1/6/2010 | 3/12/2010 |
| USACE | pdf | toc_TA_07.pdf | 178 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | Trafc10_07.pdf | 235 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | Transp_90_07.pdf | 2,938 | 1/6/2010 | 1/27/2010 |
| USACE | pdf | TransTrans90_07.pdf | 378 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | Trnsactns17_07.pdf | 173 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | US State and County FIPS_07.pdf | 559 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | Wnd10_06_Jan.pdf | 213 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | Z4c15_07.pdf | 390 | 1/6/2010 | 1/6/2010 |
| USACE | pdf | ZIP150_07.pdf | 460 | 1/6/2010 | 1/6/2010 |
| USACE | shp | bays_estuaries.shp | 280 | 1/3/2010 | 3/5/2010 |
| USACE | shp | CA_LEVEE_CL.shp | 3,497 | 1/3/2010 | 3/12/2010 |
| USACE | shp | caalama.shp | 9 | 11/28/2006 | 2/18/2010 |
| USACE | shp | caalamal.shp | 206 | 11/28/2006 | 2/18/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | shp | caalamin.shp | 15 | 11/28/2006 | 2/18/2010 |
| USACE | shp | caalammw.shp | 150 | 11/28/2006 | 2/18/2010 |
| USACE | shp | caalampk.shp | 286 | 11/28/2006 | 2/18/2010 |
| USACE | shp | caalamr.shp | 262 | 11/28/2006 | 2/18/2010 |
| USACE | shp | caalams.shp | 10,309 | 11/28/2006 | 2/18/2010 |
| USACE | shp | caalamw.shp | 524 | 11/28/2006 | 2/18/2010 |
| USACE | shp | caalamwp.shp | 317 | 11/28/2006 | 2/18/2010 |
| USACE | shp | caalamx.shp | 8 | 11/28/2006 | 2/18/2010 |
| USACE | shp | caconta.shp | 5 | 11/28/2006 | 1/14/2010 |
| USACE | shp | cacontal.shp | 244 | 11/28/2006 | 1/14/2010 |
| USACE | shp | cacontin.shp | 9 | 11/28/2006 | 1/14/2010 |
| USACE | shp | cacontmw.shp | 84 | 11/28/2006 | 1/14/2010 |
| USACE | shp | cacontpk.shp | 184 | 11/28/2006 | 1/14/2010 |
| USACE | shp | cacontr.shp | 216 | 11/28/2006 | 1/14/2010 |
| USACE | shp | caconts.shp | 11,597 | 11/28/2006 | 1/14/2010 |
| USACE | shp | cacontw.shp | 538 | 11/28/2006 | 1/14/2010 |
| USACE | shp | cacontwp.shp | 383 | 11/28/2006 | 1/14/2010 |
| USACE | shp | cacontx.shp | 5 | 11/28/2006 | 1/14/2010 |
| USACE | shp | cahpn.shp | 19 | 1/3/2010 | 2/10/2010 |
| USACE | shp | cahpn.shp | 19 | 1/3/2010 | 1/6/2010 |
| USACE | shp | casacra.shp | 81 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casacral.shp | 170 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casacrin.shp | 13 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casacrmw.shp | 172 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casacrpk.shp | 272 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casacrr.shp | 169 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casacrrc.shp | 1 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casacrs.shp | 9,925 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casacrw.shp | 684 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casacrwp.shp | 648 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casacrx.shp | 6 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casanja.shp | 3 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casanjal.shp | 50 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casanjin.shp | 6 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casanjmw.shp | 272 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casanjpk.shp | 40 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casanjr.shp | 192 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casanjs.shp | 4,591 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casanjw.shp | 390 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casanjwp.shp | 751 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casanjx.shp | 5 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casolaa.shp | 16 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casolaal.shp | 92 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casolain.shp | 4 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casolamw.shp | 318 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casolapk.shp | 80 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casolar.shp | 67 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casolas.shp | 3,675 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casolaw.shp | 767 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casolawp.shp | 860 | 11/28/2006 | 1/14/2010 |
| USACE | shp | casolax.shp | 4 | 11/28/2006 | 1/14/2010 |
| USACE | shp | cayoloa.shp | 7 | 11/28/2006 | 1/15/2010 |
| USACE | shp | cayoloal.shp | 37 | 11/28/2006 | 1/15/2010 |
| USACE | shp | cayoloin.shp | 2 | 11/28/2006 | 1/15/2010 |
| USACE | shp | cayolomw.shp | 47 | 11/28/2006 | 1/15/2010 |
| USACE | shp | cayolopk.shp | 29 | 11/28/2006 | 1/15/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | shp | cayolor.shp | 54 | 11/28/2006 | 1/15/2010 |
| USACE | shp | cayolos.shp | 1,924 | 11/28/2006 | 1/15/2010 |
| USACE | shp | cayolow.shp | 659 | 11/28/2006 | 1/15/2010 |
| USACE | shp | cayolowp.shp | 295 | 11/28/2006 | 1/15/2010 |
| USACE | shp | cayolox.shp | 2 | 11/28/2006 | 1/15/2010 |
| USACE | shp | CDL_levee_centerline.shp | 10,297 | 1/3/2010 | 3/12/2010 |
| USACE | shp | channel-sj.shp | 53 | 1/3/2010 | 3/12/2010 |
| USACE | shp | Channel.shp | 53 | 1/3/2010 | 3/12/2010 |
| USACE | shp | ChannelAlignmentExisting.shp | 9 | 1/3/2010 | 3/12/2010 |
| USACE | shp | ChannelAlignmentProposed.shp | 8 | 1/3/2010 | 3/12/2010 |
| USACE | shp | cities.shp | 3 | 1/3/2010 | 3/12/2010 |
| USACE | shp | Coastal_bays_names.shp | 9 | 1/3/2010 | 3/5/2010 |
| USACE | shp | combinedSoil.shp | 60,746 | 1/3/2010 | 3/12/2010 |
| USACE | shp | County Line.shp | 8,063 | 1/14/2010 | 3/12/2010 |
| USACE | shp | CurrentUplandDisposalPLG.shp | 13 | 1/3/2010 | 3/12/2010 |
| USACE | shp | DeepWater_ShipChannel.shp | 2 | 1/5/2010 | 3/12/2010 |
| USACE | shp | delta_ftx10_10ft.shp | 33,030 | 2/16/2010 | 3/12/2010 |
| USACE | shp | delta_ftx10_5ft.shp | 67,989 | 2/16/2010 | 3/12/2010 |
| USACE | shp | DeltaLevee_centerlines.shp | 759 | 1/3/2010 | 3/12/2010 |
| USACE | shp | Disposal-polys.shp | 10 | 2/19/2010 | 2/19/2010 |
| USACE | shp | Disposal-polys.shp | 10 | 1/3/2010 | 2/16/2010 |
| USACE | shp | DWR_Mainten_Area.shp | 69 | 1/3/2010 | 3/12/2010 |
| USACE | shp | Groundwater Basin.shp | 10,243 | 1/3/2010 | 3/12/2010 |
| USACE | shp | hcaalamx.shp | 1,065 | 11/28/2006 | 2/18/2010 |
| USACE | shp | hcacontx.shp | 964 | 11/28/2006 | 1/14/2010 |
| USACE | shp | hcasacrx.shp | 803 | 11/28/2006 | 1/14/2010 |
| USACE | shp | hcasanjx.shp | 460 | 11/28/2006 | 1/14/2010 |
| USACE | shp | hcasolax.shp | 444 | 11/28/2006 | 1/14/2010 |
| USACE | shp | hcayolox.shp | 279 | 11/28/2006 | 1/15/2010 |
| USACE | shp | Legal Delta.shp | 34 | 1/3/2010 | 3/12/2010 |
| USACE | shp | Levee.shp | 778 | 1/3/2010 | 3/12/2010 |
| USACE | shp | map_strip_poly.shp | 1 | 1/3/2010 | 3/12/2010 |
| USACE | shp | naip_1-1_1n_ca001_2005_1.shp | 13 | 1/3/2010 | 1/5/2010 |
| USACE | shp | naip_1-1_1n_ca013_2005_1.shp | 13 | 1/3/2010 | 1/4/2010 |
| USACE | shp | naip_1-1_1n_ca095_2005_1.shp | 13 | 1/3/2010 | 1/4/2010 |
| USACE | shp | NHDArea.shp | 8,415 | 2/19/2010 | 2/19/2010 |
| USACE | shp | nwibay.shp | 14,697 | 1/3/2010 | 3/10/2010 |
| USACE | shp | nwidelta.shp | 10,882 | 1/14/2010 | 3/5/2010 |
| USACE | shp | OCS_Coastline.shp | 3,594 | 2/19/2010 | 2/19/2010 |
| USACE | shp | Other_Properties.shp | 30 | 1/3/2010 | 2/16/2010 |
| USACE | shp | picture.shp | 5 | 1/3/2010 | 2/16/2010 |
| USACE | shp | picture.shp | 3 | 1/3/2010 | 2/10/2010 |
| USACE | shp | PLA_CDD_GPLanduseElement_0206.shp | 3,372 | 1/3/2010 | 2/16/2010 |
| USACE | shp | PLA_CDD_UrbanLimits_0105.shp | 655 | 1/3/2010 | 2/16/2010 |
| USACE | shp | PLA_CDD_Zoning_0206.shp | 1,582 | 1/3/2010 | 2/16/2010 |
| USACE | shp | placement_area_20091214.shp | 183 | 1/3/2010 | 3/12/2010 |
| USACE | shp | placement_area_20091216.shp | 184 | 1/5/2010 | 3/5/2010 |
| USACE | shp | placement_area_20100219.shp | 201 | 2/24/2010 | 3/12/2010 |
| USACE | shp | Port_Property.shp | 9 | 1/3/2010 | 2/16/2010 |
| USACE | shp | precipa.shp | 1,577 | 1/3/2010 | 3/12/2010 |
| USACE | shp | Reclamation_District.shp | 414 | 1/3/2010 | 3/12/2010 |
| USACE | shp | Regional_Water_Quality_Control_Boundary.shp | 3,407 | 1/3/2010 | 3/12/2010 |
| USACE | shp | restoration_projects.shp | 2 | 1/3/2010 | 3/12/2010 |
| USACE | shp | restoration_projects.shp | 2 | 1/3/2010 | 2/16/2010 |
| USACE | shp | Sac_Streams.shp | 7,711 | 1/3/2010 | 3/5/2010 |
| USACE | shp | SacChanCLReach.shp | 26 | 1/3/2010 | 3/12/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | shp | SacChanDisposalPolys.shp | 9 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SacChPolyReach.shp | 21 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SacMileMarksIncNegs.shp | 4 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SacWaterwayPolyReach.shp | 639 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SCDlakes.shp | 1,166 | 1/3/2010 | 3/5/2010 |
| USACE | shp | SDCboundary.shp | 1 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SDWSCVegetation.shp | 116 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SJ-lights_5-41.shp | 2 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SJ-lights_3-25.shp | 2 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SJ-mile.shp | 2 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SJ-photo-map-sheets.shp | 6 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SJ-station.shp | 8 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SPK_NLD_LeveeSEGMENT_start_end.shp | 35 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SPK_NLD_LeveeSEGMENTS.shp | 3,126 | 1/3/2010 | 3/12/2010 |
| USACE | shp | SPN_placement_areas_inprogress.shp | 183 | 1/3/2010 | 3/12/2010 |
| USACE | shp | State Water Project Waterway.shp | 1,311 | 1/3/2010 | 3/12/2010 |
| USACE | shp | Stockton_DWSC_Sites_modified.shp | 3 | 1/3/2010 | 3/12/2010 |
| USACE | shp | streams.shp | 80,514 | 1/3/2010 | 3/5/2010 |
| USACE | shp | target_parcels.shp | 22 | 1/3/2010 | 3/12/2010 |
| USACE | shp | USA_Property.shp | 3 | 1/3/2010 | 2/16/2010 |
| USACE | shp | USACEDistrict_Regulatory_Bound.shp | 173 | 1/3/2010 | 3/12/2010 |
| USACE | shp | USACEfederal_Lands_(areas).shp | 907 | 1/3/2010 | 3/12/2010 |
| USACE | shp | XYsacram_w.shp | 38 | 1/3/2010 | 3/12/2010 |
| USACE | sid | naip_1-1_1n_s_ca001_2005_1.sid | 1,123,599 | 1/3/2010 | 1/3/2010 |
| USACE | sid | naip_1-1_1n_s_ca013_2005_1.sid | 885,899 | 1/3/2010 | 1/3/2010 |
| USACE | sid | naip_1-1_1n_s_ca095_2005_1.sid | 986,495 | 1/3/2010 | 1/4/2010 |
| USACE | sid | sac_middle.sid | 76,432 | 1/3/2010 | 1/3/2010 |
| USACE | sid | sac_middle.sid | 76,432 | 1/3/2010 | 1/3/2010 |
| USACE | sid | sac_middle.sid | 76,432 | 2/19/2010 | 2/19/2010 |
| USACE | sid | sac_middle.sid | 76,432 | 1/3/2010 | 1/3/2010 |
| USACE | sid | sac_north.sid | 87,414 | 1/3/2010 | 1/3/2010 |
| USACE | sid | sac_north.sid | 87,414 | 1/3/2010 | 1/3/2010 |
| USACE | sid | sac_north.sid | 87,414 | 2/19/2010 | 2/19/2010 |
| USACE | sid | sac_north.sid | 87,414 | 1/3/2010 | 1/3/2010 |
| USACE | sid | sac_south.sid | 68,814 | 1/3/2010 | 1/3/2010 |
| USACE | sid | sac_south.sid | 68,814 | 1/3/2010 | 1/3/2010 |
| USACE | sid | sac_south.sid | 68,814 | 2/19/2010 | 2/19/2010 |
| USACE | sid | sac_south.sid | 68,814 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Clark83ft.tif | 2,193 | 1/3/2010 | 1/3/2010 |
| USACE | tif | disposal_areas.tif | 1,527 | 1/3/2010 | 1/3/2010 |
| USACE | tif | o38121a6.tif | 6,381 | 1/3/2010 | 1/3/2010 |
| USACE | tif | o38121a7.tif | 11,762 | 1/3/2010 | 1/3/2010 |
| USACE | tif | o38121a8.tif | 13,324 | 1/3/2010 | 1/3/2010 |
| USACE | tif | o38121b6.tif | 6,897 | 1/3/2010 | 1/3/2010 |
| USACE | tif | o38121c5.tif | 5,661 | 1/3/2010 | 1/3/2010 |
| USACE | tif | o38121c6.tif | 4,727 | 1/3/2010 | 1/3/2010 |
| USACE | tif | o38121d5.tif | 6,061 | 1/3/2010 | 1/3/2010 |
| USACE | tif | o38121d6.tif | 3,804 | 1/3/2010 | 1/3/2010 |
| USACE | tif | o38121e5.tif | 6,909 | 1/3/2010 | 1/3/2010 |
| USACE | tif | o38121e6.tif | 4,764 | 1/3/2010 | 1/3/2010 |
| USACE | tif | sac-west.tif | 4,251 | 2/19/2010 | 2/19/2010 |
| USACE | tif | sac-west.tif | 4,251 | 1/3/2010 | 1/3/2010 |
| USACE | tif | sacdwsc-3.tif | 10,946 | 2/19/2010 | 2/19/2010 |
| USACE | tif | sacdwsc-3.tif | 10,946 | 1/3/2010 | 1/3/2010 |
| USACE | tif | sacdwsc-north.tif | 9,721 | 2/19/2010 | 2/19/2010 |
| USACE | tif | sacdwsc-north.tif | 9,721 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | tif | sacdwsc-south.tif | 8,999 | 2/19/2010 | 2/19/2010 |
| USACE | tif | sacdwsc-south.tif | 8,999 | 1/3/2010 | 1/3/2010 |
| USACE | tif | SacE83ft.tif | 7,835 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto01.tif | 22,937 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto02.tif | 23,069 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto03.tif | 22,949 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto04.tif | 23,048 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto05.tif | 23,123 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto06.tif | 22,985 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto07.tif | 23,141 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto08.tif | 23,092 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto09.tif | 23,170 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto10.tif | 23,140 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto11.tif | 22,930 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto12.tif | 22,986 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto13.tif | 23,063 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto14.tif | 23,017 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto15.tif | 23,073 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto16.tif | 22,938 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto17.tif | 29,175 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto18.tif | 46,289 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto19.tif | 22,964 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto20.tif | 22,899 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto21.tif | 23,087 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto22.tif | 23,013 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto23.tif | 23,042 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto24.tif | 23,017 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto25.tif | 23,017 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto26.tif | 23,032 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto27.tif | 22,996 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto28.tif | 22,968 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto29.tif | 22,910 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto30.tif | 22,981 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto31.tif | 22,905 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto32.tif | 23,041 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto33.tif | 22,981 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto34.tif | 22,953 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto35.tif | 22,989 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto36.tif | 22,957 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto37.tif | 23,118 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto38.tif | 23,003 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto39.tif | 23,035 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto40.tif | 22,970 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto41.tif | 23,048 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto42.tif | 22,966 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto43.tif | 23,098 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto44.tif | 22,901 | 1/3/2010 | 1/3/2010 |
| USACE | tif | Sacphoto45.tif | 22,890 | 1/3/2010 | 1/3/2010 |
| USACE | tif | SACRAMENTO EAST.tif | 8,189 | 2/19/2010 | 2/19/2010 |
| USACE | tif | SACRAMENTO EAST.tif | 8,189 | 1/3/2010 | 1/3/2010 |
| USACE | tif | SacW83ft.tif | 4,260 | 1/3/2010 | 1/3/2010 |
| USACE | TXT | (C)ADOBE.TXT | 6 | 1/6/2010 | 1/6/2010 |
| USACE | txt | cahpn.txt | 19 | 1/3/2010 | 1/4/2010 |
| USACE | txt | cahpn.txt | 19 | 1/3/2010 | 1/3/2010 |
| USACE | txt | cahpn.txt | 19 | 1/3/2010 | 1/3/2010 |
| USACE | txt | california_north_FGDC.txt | 64 | 1/3/2010 | 1/3/2010 |

# Appendix B. GIS Data Files Reviewed for Project Relevance

| Source | File Type | Filename | KBytes Size | Creation Date | Modification Date |
|---|---|---|---|---|---|
| USACE | txt | california_north_FGDC.txt | 64 | 1/3/2010 | 3/12/2010 |
| USACE | txt | m2403.txt | 115 | 1/3/2010 | 1/3/2010 |
| USACE | txt | metadata.txt | 159 | 1/3/2010 | 1/5/2010 |
| USACE | txt | mf2403d.met.txt | 244 | 1/3/2010 | 1/3/2010 |
| USACE | txt | naip_1-1_1n_ca001_2005_1.met.txt | 14 | 1/3/2010 | 1/3/2010 |
| USACE | txt | naip_1-1_1n_s_ca001_2005_1.met.txt | 12 | 1/3/2010 | 1/3/2010 |
| USACE | txt | NWIwetlandscodes.txt | 22 | 1/3/2010 | 1/3/2010 |
| USACE | txt | precipa.txt | 3 | 1/3/2010 | 1/3/2010 |
| USACE | TXT | README.TXT | 1 | 1/6/2010 | 3/12/2010 |
| USACE | txt | wetlands.txt | 10 | 1/3/2010 | 3/10/2010 |
| USGS | pdf | CA_Antioch_North_20090721_OM_geo.pdf | 12,399 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Birds_Landing_20090721_OM_geo.pdf | 9,849 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Brentwood_20090721_OM_geo.pdf | 17,729 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Bruceville_20090721_OM_geo.pdf | 12,742 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Clarksburg_20090721_OM_geo.pdf | 14,345 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Clifton_Court_Forebay_20090721_OM_geo. | 10,003 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Courtland_20090721_OM_geo.pdf | 14,761 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Dozier_20090721_OM_geo.pdf | 11,355 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Florin_20090721_OM_geo.pdf | 19,893 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Holt_20090721_OM_geo.pdf | 11,126 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Honker_Bay_20090721_OM_geo.pdf | 16,224 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Isleton_20090721_OM_geo.pdf | 11,793 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Jersey_Island_20090721_OM_geo.pdf | 12,277 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Lathrop_20090721_OM_geo.pdf | 13,540 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Liberty_Island_20090721_OM_geo.pdf | 10,748 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Lodi_North_20090721_OM_geo.pdf | 18,409 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Lodi_South_20090721_OM_geo.pdf | 19,446 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Rio_Vista_20090721_OM_geo.pdf | 10,794 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Ripon_20090721_OM_geo.pdf | 14,578 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Sacramento_West_20090721_OM_geo.pdf | 17,001 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Saxon_20090721_OM_geo.pdf | 10,724 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Stockton_West_20090721_OM_geo.pdf | 19,261 | 1/3/2010 | 1/3/2010 |
| USGS | pdf | CA_Terminous_20090721_OM_geo.pdf | 11,632 | 1/3/2010 | 1/3/2010 |
| YoloCounty | dbf | Zoning 011110.dbf | 11,661 | 2/11/2010 | 2/11/2010 |
| YoloCounty | shp | Zoning 011110.shp | 23,113 | 2/11/2010 | 2/11/2010 |