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## **3.0 PROJECT DESCRIPTION**

### **3.1 INTRODUCTION**

The proposed Shipyard Sediment Remediation Project (proposed project) is the dredging of sediment adjacent to shipyards in San Diego Bay; the dewatering and solidification of the dredged material (onshore or on a barge); the potential treatment of decanted water (anticipated disposal to the sanitary sewer system); and the transport of the removed material to an appropriate landfill for disposal. The purpose of the project is to implement a Tentative Cleanup and Abatement Order (CAO) issued by the California Regional Water Quality Control Board, San Diego Region (hereinafter referred to as the San Diego Water Board). The San Diego Water Board is the Lead Agency under the California Environmental Quality Act (CEQA) for the proposed project. The dredging will occur in an area of San Diego Bay defined in the Tentative CAO. The San Diego Water Board is considering the use of one or more staging sites for the dewatering and treatment of the dredge, as further described in this project description. The sediment removal footprint and optional staging sites comprise the project site for the purpose of this Program Environmental Impact Report (PEIR).

### **3.2 PROJECT LOCATION**

The study area for the sediment removal project (also referred to as the Shipyard Sediment Site in the Draft Technical Report for Tentative CAO No. R9-2011-0001 dated September 15, 2010) is located along the eastern shore of central San Diego Bay, extending approximately from the Sampson Street Extension on the northwest to Chollas Creek on the southeast, and from the shoreline out to the San Diego Bay main shipping channel to the west. The sediment removal site (also referred to as the Proposed Remedial Footprint in the Draft Technical Report for Tentative CAO No. R9-2011-0001) comprises approximately 15.2 acres that are subject to dredging and 2.3 acres that are subject to clean sand cover, primarily under piers. The project consists of marine sediments in the bottom bay waters that contain elevated levels of pollutants above San Diego Bay background conditions. This area, combined with the potential upland staging areas described below, are hereinafter collectively referred to as the “project site” (Figure 3-1, Project Location).

The removal of the marine sediments will require upland areas for dewatering, solidification, and stockpiling of the materials and potential treatment of decanted waters prior to off-site disposal. Therefore, in addition to the open waters of the Shipyard Sediment Site, five upland areas have been identified by the San Diego Water Board as potential sediment staging areas. Each of the potential staging areas has potential usable areas based on a

review of aerial photographs, which are illustrated on Figures 3-2 through 3-7 and further described below.

- **Staging Area 1:** 10th Avenue Marine Terminal and Adjacent Parking (approximately 49.66 potentially usable acres)
- **Staging Area 2:** Commercial Berthing Pier and Parking Lots Adjacent to Coronado Bridge (approximately 11.66 potentially usable acres)
- **Staging Area 3:** SDG&E Leasehold/BAE Systems Leasehold/BAE Systems and NASSCO Parking Lots (approximately 7.27 potentially usable acres)
- **Staging Area 4:** NASSCO/NASSCO Parking and Parking Lot North of Harbor Drive (approximately 3.85 potentially usable acres). Staging Area 4 is not located adjacent to the waterfront; therefore, sediment transport from the barge to the staging area would be required.
- **Staging Area 5:** 24th Street Marine Terminal and Adjacent Parking Lots (approximately 145.31 potentially usable acres)

The Tentative CAO notes that the specific actions to be taken by the responsible parties for the cleanup will be described in a Remedial Action Plan (RAP) that is to be prepared and submitted to the San Diego Water Board.

### 3.3 PROJECT SETTING AND SITE DESCRIPTION

The project site is located under the planning jurisdiction of the San Diego Unified Port District (Port District) and is identified as District 4 in the certified Port Master Plan. The Port District is a special government entity that was created in 1962 by the San Diego Unified Port District Act, California Harbors and Navigation Code, in order to manage San Diego Harbor and administer certain public lands along San Diego Bay. The Port District holds and manages natural resources as trust property on behalf of the People of the State of California, including the land occupied by NASSCO and BAE Systems. The Port Master Plan water use designation within the limits of the proposed project is Industrial-Specialized Berthing.

San Diego Bay is designated as a State Estuary under Section 1, Division 18 (commencing with section 28000) of the Public Resources Code (PRC). The San Diego Bay shoreline between Sampson Street and 28th Street is listed on the Clean Water Act (CWA) section 303(d) List of Water Quality Limited Segments for elevated levels of copper, mercury, zinc, polynuclear aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs) in the marine sediment. These pollutants are impairing the aquatic life, aquatic-dependent wildlife, and human health beneficial uses designated for San Diego Bay. The northeast boundary of the Shipyard Sediment Site occupies this shoreline.

The principal structural components within the Shipyard Sediment Site include the concrete bulkheads, piers, and dry dock facilities associated with the two shipyard facilities. Bathymetry at the site varies substantially due to the presence of shipways, dry docks, and berths, and ranges from -2 mean lower low water (MLLW) along the bulkheads to -70 feet MLLW at the BAE Systems dry dock sump area.

The marine habitat within the sediment removal area contains both vegetated and unvegetated subtidal soft-bottom habitats, pier pilings, and bulkhead walls. The vegetated habitat species include sparse beds of eelgrass (*Zostera marina*). The entire extent of the sediment removal area shoreline is artificially stabilized and generally consists of a vertical sheet pile bulkhead and seawall. The marine habitat types include vertical bulkhead walls and dock structures, vegetated and nonvegetated soft-bottom subtidal habitats, and open water. These habitats support marine plants, invertebrates, and fish.

The five potential staging areas consist primarily of leasehold lands and associated parking areas in the immediate vicinity of the Shipyard Sediment Site. The actual usable areas within each potential staging area are comprised of open paved portions that could be used for the dewatering, solidifying, and drying of the dredged marine sediments. Staging Areas 1 through 4 are located within the City of San Diego and are designated in the City's General Plan as Mixed Use and Industrial Employment. Staging Area 5 is located approximately 3.5 miles from the shipyards and within the City of National City. It is currently designated in the City's General Plan as Industrial-Tidelands Manufacturing, and is under the jurisdiction of the Port District. National City is currently updating their General Plan; the proposed land use designation for Staging Area 5 in the updated General Plan is "San Diego Unified Port District," indicating that land uses are governed by the San Diego Port Master Plan. The currently adopted (1996) combined General Plan/zoning map identifies an overlay zone in Staging Area 5 as subject to the "Unified Port District" overlay zone, also indicating that land uses are governed by the San Diego Port Master Plan.

### **3.4 PROJECT BACKGROUND**

The San Diego Water Board stipulates that several agencies and/or parties caused or permitted the discharge of waste to the Shipyard Sediment Site that has resulted in the accumulation of waste in the marine sediment. The contaminated marine sediment has caused conditions of contamination or nuisance in San Diego Bay that adversely affect aquatic life, aquatic-dependent wildlife, human health, and San Diego Bay beneficial uses. The San Diego Water Board determined that issuance of a Tentative CAO was the appropriate regulatory tool to use for correcting the impairment at the Shipyard Sediment Site.

CAOs are issued under the authority of the California Water Code (section 13304). As defined in the State Water Resources Control Board (State Water Board) Water Quality Enforcement Policy (adopted November 17, 2009):

*CAOs may be issued to any person who has discharged or discharges waste into state waters in violation of any waste discharge requirement or other order or prohibition issued by a Regional Water Board or the State Water Board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance (discharger). The CAO requires the discharger to clean up the waste or abate the effects of the waste, or both, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including, but not limited to, overseeing cleanup and abatement efforts.*

A CAO requires dischargers to clean up the pollution to background levels or the best water quality that is reasonable. At a minimum, cleanup levels must fully support beneficial uses, unless the Regional Water Board allows a containment zone. The Tentative CAO determined that cleaning up to a background sediment quality level at the Shipyard Sediment Site is economically infeasible. Therefore, the Tentative CAO established alternative cleanup levels for the project that are the lowest technologically and economically achievable levels as required under California Code of Regulations (CCR) Title 23 section 2550.4(e). These alternative levels are described in Section 3.6, Project Characteristics.

This PEIR addresses the cleanup project as identified in the Tentative CAO No. R9-2011-0001, dated September 15, 2010.

### **3.5 PROJECT GOALS AND OBJECTIVES**

The primary goal of the project is to improve water quality in San Diego Bay, consistent with the provisions of the Tentative CAO. The specific project objectives are:

- Protect the quality of the waters of San Diego Bay for use and enjoyment by the people of the state by executing a shipyard sediment cleanup project consistent with the provisions of Tentative CAO No. R9-2011-0001.
- Attain cleanup levels as included in the Tentative CAO No. R9-2011-0001 (judged to be technologically and economically feasible as defined in section 2550.4 of CCR Title 23, pursuant to Resolution No. 92-49).
- Remediate areas identified in Attachment 2 of Tentative CAO No. R9-2011-0001.
- Minimize adverse effects to aquatic life beneficial uses, including Estuarine Habitat (EST), Marine Habitat (MAR), and Migration of Aquatic Organisms (MIGR).

- Minimize adverse effects to aquatic-dependent wildlife beneficial uses, including Wildlife Habitat (WILD), Preservation of Biological Habitats of Special Significance (BIOL), and Rare, Threatened, or Endangered Species (RARE).
- Minimize adverse effects to human health beneficial uses, including Contact Water Recreation (REC-1), Non-contact Water Recreation (REC-2), Shellfish Harvesting (SHELL), and Commercial and Sport Fishing (COMM).
- Implement a cleanup plan that will have long-term effectiveness.
- Minimize adverse effects to the natural and built environment.
- Avoid or minimize adverse impacts to residential areas.
- Result in no long-term loss of use of shipyard and other San Diego Bay-dependent facilities.
- Minimize short-term loss of use of shipyard and other San Diego Bay-dependent facilities.

### **3.6 PROJECT CHARACTERISTICS**

The project addressed in this PEIR is the implementation of Tentative CAO No. R9-2011-0001, which requires that remedial actions be implemented within the Shipyard Sediment Site. Remedial actions may include dredging, application of clean sand cover, and/or natural recovery depending upon a number of factors, including levels of contamination in the sediment and site accessibility. The Tentative CAO determined that dredging and disposal of sediments is the proposed remedy for approximately 15.2 acres of the site and is expected to generate approximately 143,400 cubic yards (cy) of contaminated marine sediment. In addition to the 15.2 acres targeted for dredging, approximately 2.3 acres of the project site are inaccessible or under-pier areas that will be remediated by one or more methods other than dredging, most likely by application of clean sand cover. The remedial action would be followed by a period of post-remedial monitoring. Some variation in the schedule may occur depending upon selected equipment size and numbers, the distance to the process area, potential ship traffic, and the contractual obligations of the shipyards at the time of the dredge activity.

The project includes dredging of and/or applying a clean sand cover to the contaminated soils; vessel transport to shore; dewatering, stockpiling, and testing of dredged materials at a landside staging location; and truck transport of dredge materials to the appropriate landfill disposal facility. Each of these components is further described below.

There are two scheduling options for completion of the remedial action. The first scheduling option is expected to take 2 to 2.5 years to complete. Under this option, the dredging operations would occur for 7 months of the year and would cease from April through August during the endangered California least tern breeding season.

The second option is to implement the remedial plan with continuous dredging operations, which would be expected to take approximately 12.5 months to complete. This scenario assumes that the dewatering, solidification, and stockpiling of the materials would occur simultaneously and continuously with the dredging. Also assumed under this compressed schedule option is that dredging operations could proceed year-round, including during the breeding season of the endangered California least tern (April through August).

Actual scheduling and staging of the dredge activity will reflect the contractual obligations of the shipyards at the time the dredge activity is to occur. It is anticipated that the shipyards will be able to schedule most of the contract work around the remediation efforts with few exceptions. The San Diego Water Board anticipates there may be as much as a 5- or 6-week (or approximately a 10 percent) delay or extension of the schedule to accommodate unplanned but necessary ship movements. The preferred schedule will be determined during the final design phase. However, both schedule options are included in the technical study analyses and the PEIR. Both scheduling options would be followed by a period of postremedial monitoring, as required by the Tentative CAO.

### **3.6.1 Dredging and Clean Sand Cover Operations**

The project involves environmental dredging which, unlike navigational or construction dredging, is performed specifically for the removal of contaminated sediment while minimizing the spread of contaminants to the surrounding environment during dredging operations. The proposed project includes the dredging and removal of approximately 143,400 cy of contaminated sediment from the Shipyard Sediment Site. The cubic yard amount was identified in the Tentative CAO and includes a 1-foot over-dredge assumption.

Silt curtains and or air curtains will be placed around the dredge area, including the dredge barges. The silt curtain will consist of a geotextile fabric curtain with a floatation boom at the upper hem and ballast weights at the lower hem. The silt curtain will act as a physical barrier that will limit access to the portions of the site where the dredging operations are occurring. The silt curtain will also contain the migration of resuspended particles outside the active dredging area. A double floating silt curtain will be used; one silt curtain will be placed around the active dredging unit and an outer silt curtain will surround the remediation site.

The floating silt curtain will consist of connected lengths of geotextile fabric that help to control and contain migration of (contaminated) suspended sediments at the water surface and at depth. A continuous length of floating silt curtain will be arranged to fully enclose both the dredging equipment and the scow barge being loaded with sediment. The silt curtain will be supported by a floating boom in open water areas. Along pier edges, the dredge contractor will have the option of connecting the silt curtain directly to the structure. In either case, the contractor is required to continuously monitor the silt curtain for damage,



dislocation, or gaps, and immediately fix any locations where it is no longer continuous or where its supports have loosened.

The bottom of the silt curtain surrounding the dredging unit shall be weighted with ballast weights or rods affixed to the base of the fabric. These weights are intended to resist the natural buoyancy of the geotextile fabric and lessen its tendency to move in response to currents. The floating silt curtain around the dredging unit will be deployed in a manner that includes a gap above the seafloor to allow for the tidal ranges and fluctuations, and to sufficiently allow for dredge operation. The outer silt curtain surrounding the remediation site shall be deployed in a manner dependent on site-specific conditions including, but not limited to, depth, current velocities, existing infrastructure for curtain deployment, and proximity of sensitive habitat (i.e., essential fish habitat).<sup>1</sup>

Where feasible and applicable, curtains will be anchored and deployed from the surface of the water to just above the substrate. If necessary, silt curtains with tidal flaps will be installed to facilitate curtain deployment in areas of higher flow. Additional curtains may be required by resource agencies to isolate environmentally sensitive areas like essential fish habitat and eelgrass.

Air curtains may be used in conjunction with silt curtains to contain resuspended sediment, to enhance worker safety, and allow barges to transit into and out of the work area without the need to open and close silt curtain gates. Air curtains are formed by laying a perforated pipe along the mudline and pumping air continuously through the piping. The upwelling of the tiny bubbles to the surface of the water has the effect of preventing fine-grained sediments from passing across the line of the pipe.

It is anticipated that the dredging would utilize a derrick barge equipped with a closed environmental bucket such as the Cable Arm Environmental Clamshell® in order to maintain water quality. The dredge material will be placed on material barges and transported with the help of tugboats to a landside staging area. All barges will be outfitted with a water recovery system to collect the water deposited on the barges during dredging operations; the objective is to ensure that no water collected during the operations re-enters the San Diego Bay.

Due to the presence of infrastructure, such as piers and pilings, dredging is constrained in several locations within the project site. Therefore, contaminated areas under piers and pilings will be remedied through subaqueous, or in situ, clean sand cover. In situ clean sand cover is the placement of clean material on top of the contaminated sediment. The material is typically clean sand, silty to gravelly sand, and/or armoring material. Effective application of the clean sand cover requires sufficient thickness, careful placement to avoid disturbance, and maintenance to ensure integrity from future disturbances. Application of the clean sand

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<sup>1</sup> United States Army Corps of Engineers: Engineer Research and Development Center. 2008. Technical Guidelines for Environmental Dredging of Contaminated Sediments. ERDC/EL TR-08-29.

cover would involve the transport of material to the site (possibly via truck or barge) and placement of the materials over contaminated sediment. The application of the cover will require a materials barge outfitted with a stone slinger truck, hoppers, and conveyors to move and place the clean sand cover materials over the contaminated marine sediments.

Under State Water Board Resolution No. 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code Section 13304*, the San Diego Water Board may prescribe alternative cleanup levels less stringent than background sediment chemistry concentrations if attainment of background concentrations is technologically or economically infeasible. Resolution No. 92-49 requires that alternative levels must be set at the lowest levels the discharger demonstrates and the San Diego Water Board finds is technologically and economically achievable. Resolution No. 92-49 further requires that any alternative cleanup level shall: (1) be consistent with maximum benefit to the people of the state; (2) not unreasonably affect present and anticipated beneficial uses of such water; and (3) not result in water quality less than that prescribed in the Water Quality Control Plans and Policies adopted by the State and Regional Water Boards. The alternative cleanup levels established for the Shipyard Sediment Site are the lowest levels that are technologically and economically achievable, as required under CCR Title 23 section 2550.4(e). The San Diego Water Board is prescribing the alternative cleanup levels for sediment as specified in the Tentative CAO to protect aquatic life, aquatic-dependent wildlife, and human health-based beneficial uses consistent with the requirements of Resolution No. 92-49. Compliance with alternative cleanup levels will be determined using the monitoring protocols summarized in Tentative CAO Finding 34 and described in detail in Section 34 of the Tentative CAO Draft Technical Report (DTR). Monitoring during remediation activities is required as part of the Tentative CAO to document that remedial actions have not caused water quality standards to be violated outside of the remedial footprint, that the target cleanup levels have been reached within the remedial footprint, and to assess sediment for appropriate disposal. This monitoring, which is considered part of the proposed project, will include water quality monitoring, sediment monitoring, and disposal monitoring.

### **3.6.2 Onshore Dewatering and Treatment**

The proposed project requires a landside sediment management site with sufficient space and access to stockpile, dewater, and transport the removed dredge material. Although the exact area required for sediment management will be determined during the final design phase, it is estimated that 2 to 2.5 acres would be required. Five potential staging areas have been identified and will be discussed throughout this PEIR.

The staging area will require site preparation and construction of a pad. The site will be graded and compacted (if necessary), and a sealing liner will be put in place to prevent infiltration. An asphalt pad may need to be constructed. The drying area will be surrounded

by K-rails and sealed with foam and impervious fabric (if necessary to prevent infiltration) to form a confined area.

The dredged sediment, depending upon physical characteristics, will either be off-loaded from the materials barge by an excavator onto dump trucks for placement in the staging area, or treated with a cement-based reagent (pozzolanics) while in the barge and then off-loaded onto trucks for placement in the staging area for curing and sampling. In either event, the sediment will then be mixed with pozzolanics to accelerate the drying and to bind the sediment. The sediment will be spread out and rotated frequently to further accelerate the drying process. The drains located in the drying area will be isolated from the rest of the storm water system at the site. It is anticipated that the decanted water will be disposed of in the sanitary sewer system. If the excess water from the drying area does not meet industrial wastewater permit requirements and cannot be discharged into the City of San Diego sewage system, the water will be dealt with as contaminated waste and removed from the site by a licensed waste hauler. All collected water will be tested and disposed of in accordance with local, state, and federal requirements. After drying, soil sampling will be conducted, and all dredged material will be loaded directly onto trucks for disposal at an approved upland landfill.

### **3.6.3 Transportation and Disposal**

Once the dredge materials have been dried and tested, they will be loaded onto trucks for disposal at an approved landfill. For purposes of this project, it is assumed that 85 percent of the material will be transported from the staging area to Otay Landfill, which is approximately 15 miles southeast of the Shipyard Sediment Site. Although the sediment is not known to be classified as California hazardous material, it will be tested upon removal and prior to disposal. It is assumed for the purposes of this PEIR that up to 15 percent of the material will require transport to a hazardous waste facility (a Class I facility), which will most likely be the Kettleman Hills Landfill in Kings County, California, near Bakersfield.

The number of truck trips necessary to remove the treated dredge material is based on several factors. The average truck weight during a recent dredging project at BAE Systems was 21 tons per truck. The industry metric standard is 1.6 tons per cubic yard of sediment. Geosyntec Inc. estimates that 50 truck trips per day is the feasible maximum number of trucks that can operate at the treatment site. The treated dredge quantity is 143,400 cy. As a result of the increase in bulk that would occur after treatment with binding agents, the total treated dredge quantity to be transported off site is approximately 164,910 cy. With 21 tons (or 13.1 cy) of material per truck, and 50 truck trips per day, the total duration of the dredge-and-haul activity is approximately 50 weeks. The duration of the dredge-and-haul activity is assumed to include several weeks of equipment setup and staging area preparation; therefore, a 54-week or 12.5-month schedule is anticipated.

Trucks departing from potential Staging Areas 1 through 4 would access Interstate 5 (I-5) south via East Harbor Drive and 28th Street. Trucks departing from Staging Area 5 would access I-5 south either directly from Bay Marina Drive or from West 32nd Street to Marina Way to Bay Marina Drive. The most direct route to Otay Landfill is via I-5 south to State Route 54 (SR-54) east, to Interstate 805 (I-805) south (Figure 3-9).

### **3.7 DISCRETIONARY PERMITS, APPROVALS, OR ACTIONS REQUIRED**

In accordance with sections 15050 and 15367 of the State CEQA Guidelines, the San Diego Water Board is the designated Lead Agency for the project and has principal authority and jurisdiction for CEQA actions. The San Diego Water Board will consider certification of the PEIR in support of Final CAO approval.

Responsible Agencies are those agencies that have jurisdiction or authority over one or more aspects associated with the development of a proposed project. Trustee Agencies are state agencies that have jurisdiction by law over natural resources affected by a proposed project that are held in trust for the people of the state. Project implementation will require approval of a Coastal Development Permit (CDP) by the Port District (pursuant to the California Coastal Act) and administrative (ministerial) approvals from Responsible and Trustee Agencies, including but not limited to the San Diego Water Board (pursuant to CWA and the California Water Code Porter-Cologne Water Quality Control Act [Porter-Cologne Act]), the United States Army Corps of Engineers (ACOE) (pursuant to section 404 of the CWA and section 10 of the Federal Rivers and Harbors Appropriation Act of 1899), the National Marine Fisheries Service (NMFS) (pursuant to the Federal Magnusson-Stevens Act), the United States Fish and Wildlife Service (U.S. FWS) (pursuant to the Federal Endangered Species Act), the Air Pollution Control District (APCD), the United States Coast Guard, and the California State Lands Commission. The Port District has land use authority for the potential staging areas and has delegated jurisdiction from the California Coastal Commission to issue CDPs. The California State Lands Commission (CSLC) has jurisdiction and management authority over all ungranted tidelands and submerged lands and review authority for such lands legislatively granted to local jurisdictions, such as the Port District. See Table 3-1 for a list of discretionary and permit approvals required for project implementation.

The California Department of Fish and Game (CDFG) will not have regulatory jurisdiction (i.e., will not require a Lake or Streambed Alteration Agreement), but may comment on the PEIR pursuant to CEQA to address issues with a potential to adversely affect avian and marine species. Additionally, the CDFG will review and comment on ACOE permits pursuant to the Federal Fish and Wildlife Coordination Act.

**Table 3-1: Discretionary Permits and Approvals**

<b>Discretionary Permits/Approvals</b>	<b>Agency</b>
Final CAO Approval/Remedial Action Plan Approval	San Diego Water Board
PEIR Certification	San Diego Water Board
Project Approval	San Diego Water Board California Coastal Commission State Lands Commission (consultation)
CWA section 404 Permit and section 10 of the Federal Rivers and Harbors Appropriation Act of 1899 Permit	ACOE United States Coast Guard (consultation) U.S. FWS (consultation) NMFS (consultation)
CWA Section 401 Certification water quality permits	San Diego Water Board
Report for WDRs for Dredging Permit/Dewatering Permit	San Diego Water Board
Air Pollution Control Permit	APCD
CDP and land use approval for use of potential staging areas located in the Port District	Port District
Authorization for dredging on legislatively granted sovereign lands and remediation activity on ungranted sovereign lands	CSLC

ACOE = United States Army Corps of Engineers  
 APCD = Air Pollution Control District  
 CAO = Cleanup and Abatement Order  
 CDP = Coastal Development Permit  
 CSLC = California State Lands Commission  
 CWA = Clean Water Act  
 NMFS = National Marine Fisheries Service

PEIR = Program Environmental Impact Report  
 Port District = San Diego Unified Port District  
 San Diego Water Board = California Regional Water Quality Control Board, San Diego Region  
 U.S. FWS = United States Fish and Wildlife Service  
 WDRs = Waste Discharge Requirements

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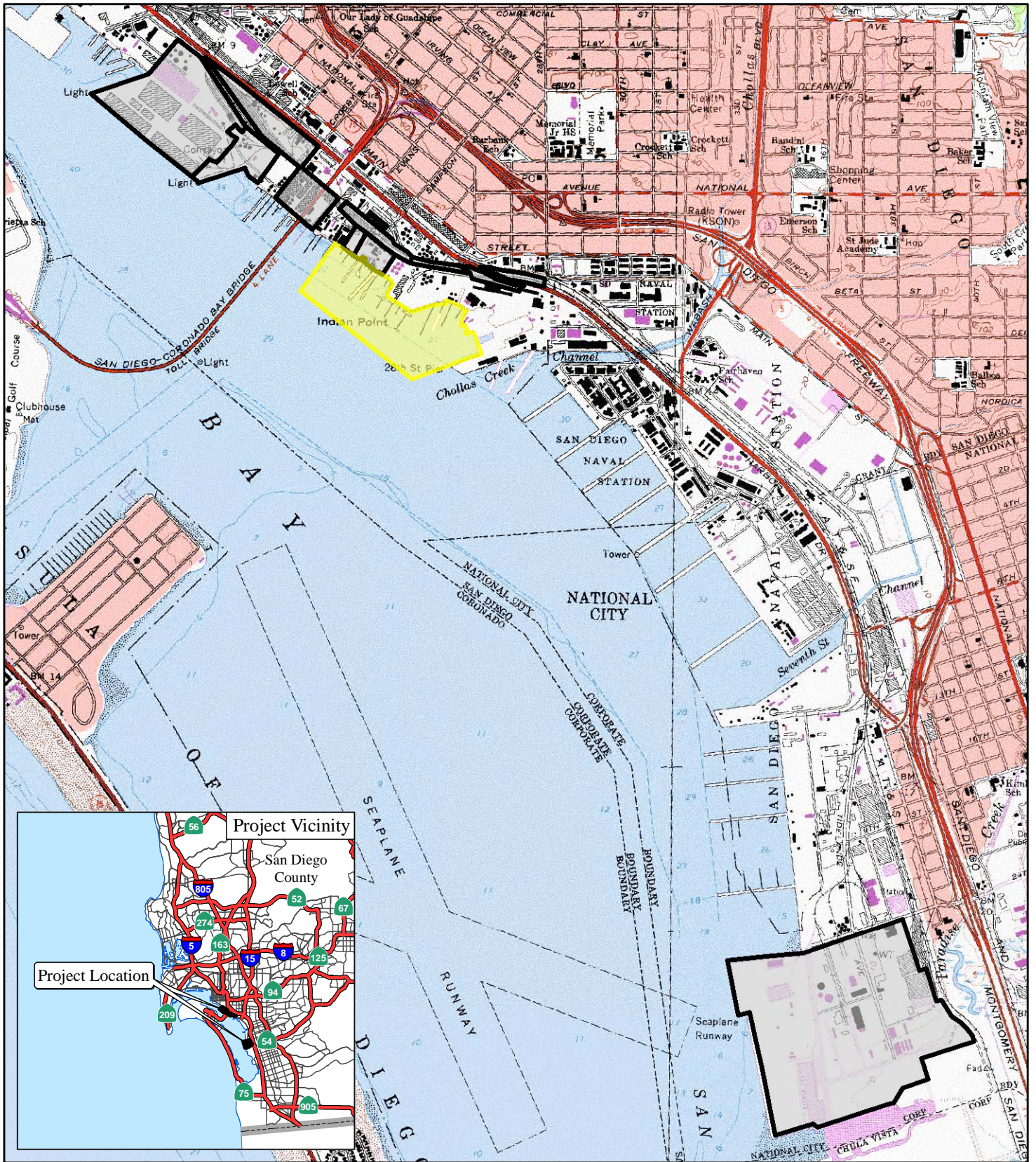
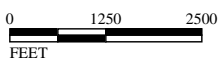


FIGURE 3-1

LSA

LEGEND

- Shipyard Sediment Project Site
- Potential Sediment Staging Areas

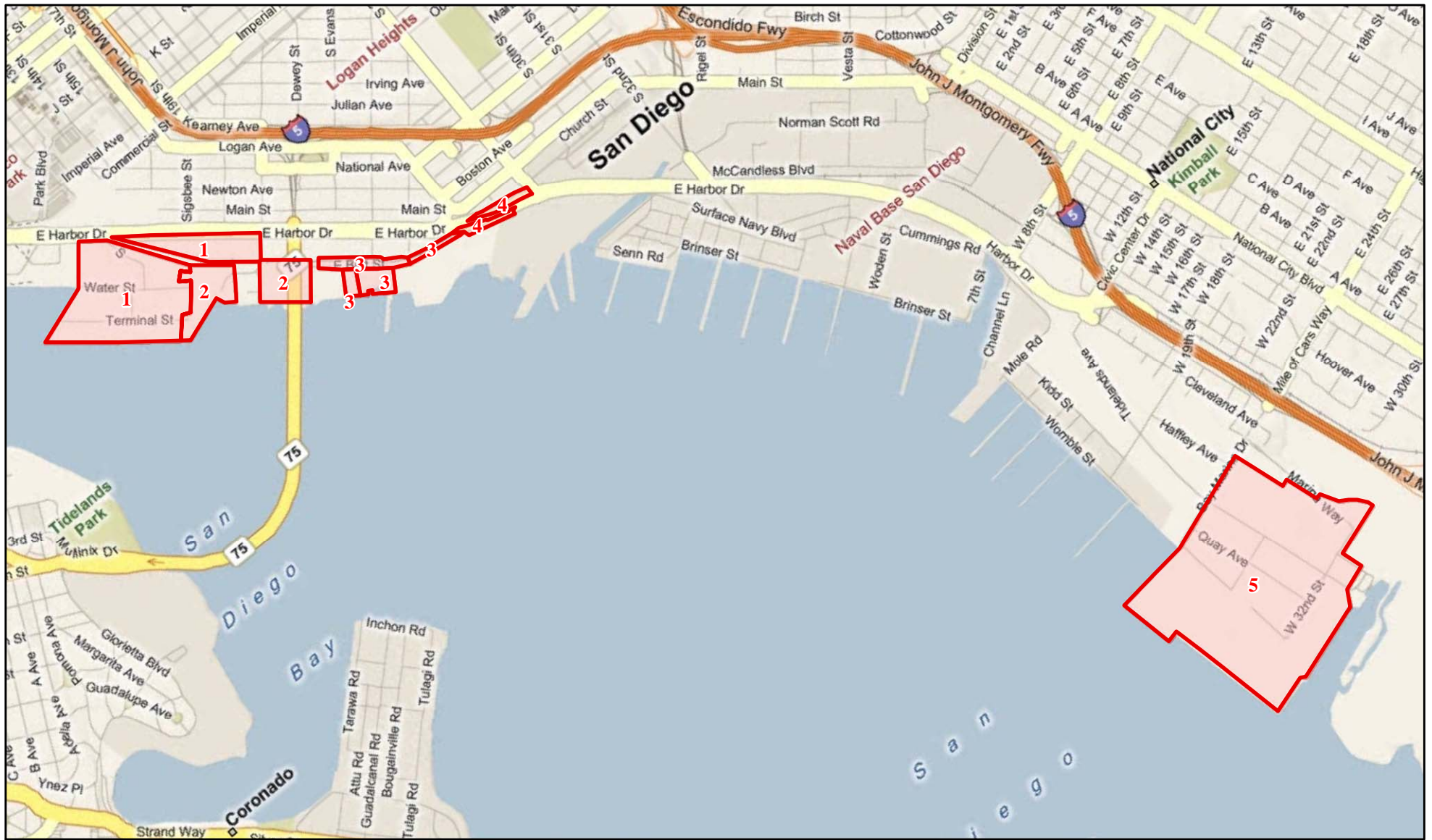


SOURCE: USGS 7.5' Quad - National City (1975), Point Loma (1994). CA  
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Shipyard Sediment Remediation Project  
 Project Location

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LSA

LEGEND

Potential Sediment Staging Areas

FIGURE 3-2



0 1250 2500  
FEET

SOURCE: Bing Maps (2008)

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Shipyards Sediment Remediation Project  
Potential Sediment Staging Locations Index

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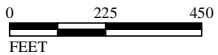


LSA

FIGURE 3-3

LEGEND

- Potential Sediment Staging Area 1
- Potential Usable Areas (with Acreage)



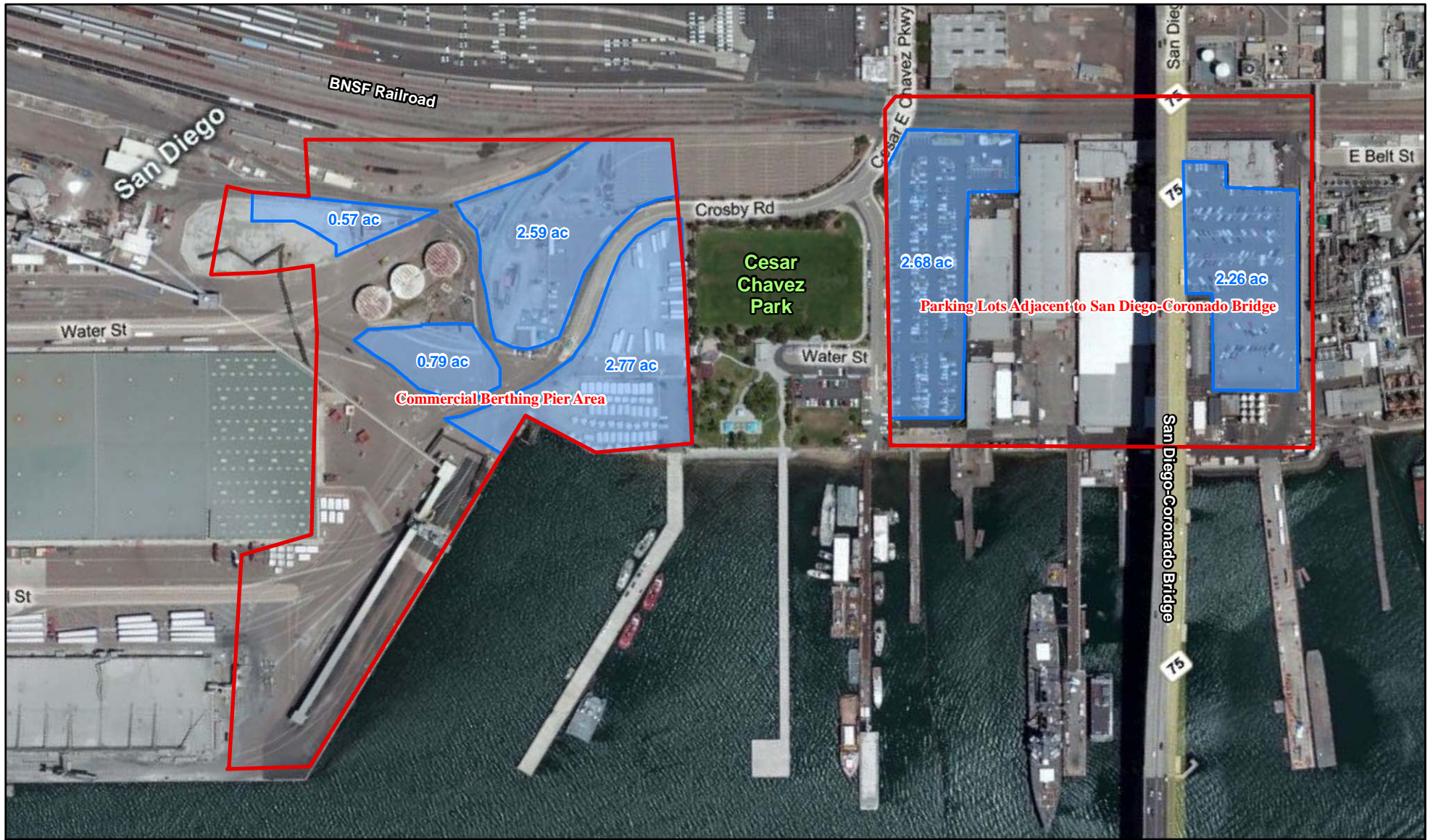
SOURCE: Bing Maps (2008)

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*Shipyards Sediment Remediation Project*

Potential Sediment Staging Area 1  
10th Avenue Marine Terminal and Adjacent Parking Lot

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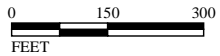


L S A

FIGURE 3-4

LEGEND

- Potential Sediment Staging Area 2
- Potential Usable Areas (with Acreage)



SOURCE: Bing Maps (2008)

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*Shipyards Sediment Remediation Project*  
 Potential Sediment Staging Area 2  
 Commercial Berthing Pier Area and  
 Parking Lots Adjacent to San Diego-Coronado Bridge

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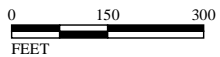


FIGURE 3-5

LSA

LEGEND

- Potential Sediment Staging Area 3
- Potential Usable Areas (with Acreage)



SOURCE: Bing Maps (2008)

R:\SWB1001\GIS\Chapter 3\Fig5\_SDGE\_and\_BAE\_Leaseholds\_and\_Parking.mxd (5/31/2011)

*Shipyards Sediment Remediation Project*

Potential Sediment Staging Area 3

SDG&E Leasehold/BAE Systems Leasehold/BAE Systems and NASSCO Parking

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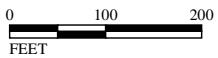


FIGURE 3-6

LSA

LEGEND

- Potential Sediment Staging Area 4
- Potential Usable Areas (with Acreage)



SOURCE: Bing Maps (2008)

R:\SWB1001\GIS\Chapter 3\Fig6\_NASSCO\_and\_Area\_North\_Harbor\_Drive\_Parking.mxd (5/13/2011)

*Shipyards Sediment Remediation Project*  
 Potential Sediment Staging Area 4  
 NASSCO Parking and Parking Area North of Harbor Drive

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FIGURE 3-7

L S A

LEGEND

- Potential Sediment Staging Area 5
- Potential Usable Areas (with Acreage)



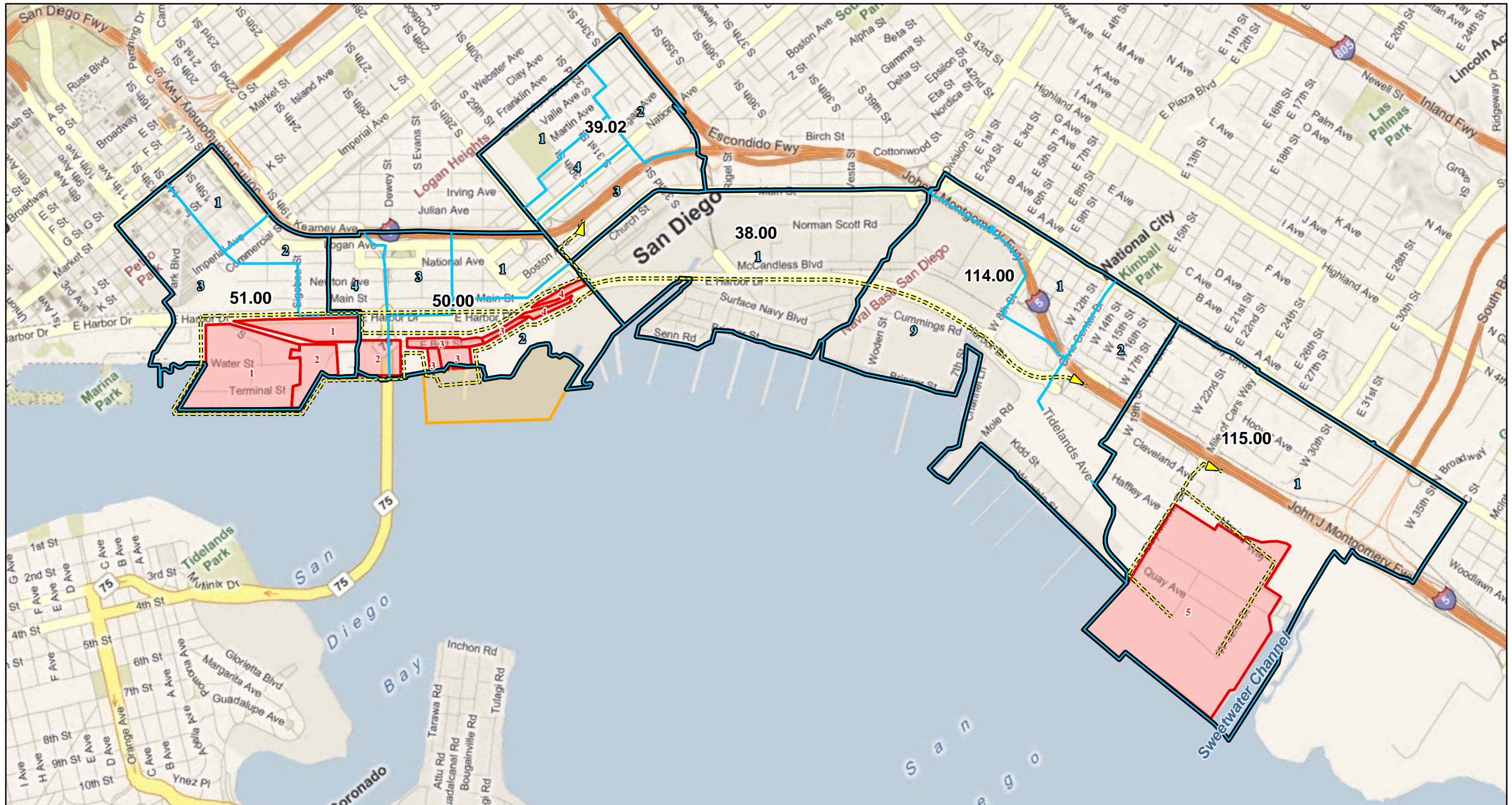
SOURCE: Bing Maps (2008)

R:\SWB1001\GIS\Chapter 3\Fig7\_24thSt\_MarineTerminal.mxd (5/13/2011)

*Shipyards Sediment Remediation Project*

Potential Sediment Staging Area 5  
24th Street Marine Terminal and Adjacent Parking Areas

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LSA

LEGEND

-  Census Tracts
-  Census Block Groups
-  Potential Sediment Staging Areas
-  Shipyard Sediment Project Site
-  Proposed Haul Routes



SOURCE: Bing Maps (2008), U.S. Census Bureau (2000)

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FIGURE 3-8

Shipyard Sediment Remediation Project  
Study Area Census Tracts and Haul Routes

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