

APPENDIX H
ENVIRONMENTAL JUSTICE REPORT

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ENVIRONMENTAL JUSTICE ANALYSIS

SHIPYARD SEDIMENT REMEDIATION PROJECT

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION

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LSA Project No. SWB1001A

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May 2011

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1.0 EXECUTIVE SUMMARY

California law defines Environmental Justice as “the fair treatment of people of all races, cultures and income with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies” (Government Code Section 65040.12 and Public Resources Code [PRC] Section 72000).

Analysis of the available socioeconomic data indicates there is a high percentage of low-income and minority population in the project study area; therefore, there is a potential for the proposed project to disproportionately impact these populations. The location of the proposed project is fixed, as it is the sediment removal of a specific location within the San Diego Bay. The haul route options are linked to the location of the sediment removal and the sediment dewatering and treatment staging area options. Five possible staging areas are considered in the Program Environmental Impact Report (PEIR), and all are located in areas with a higher percentage of low-income and minority population than the City of San Diego, National City, and County of San Diego. The proposed project impacts related to health risk (toxic air contaminants) and noise are less than significant. The proposed project impacts related to water quality, hazardous materials, and marine biology are less than significant with mitigation incorporated. The proposed project impacts related to traffic are reduced to less than significant with implementation of an alternative haul route. There are residences along a portion of the proposed project haul route; however, there are no residences immediately adjacent to the mitigation haul route.

The proposed project impacts related to air quality are significant and unavoidable for the proposed project and for the project alternatives. In sum, the proposed project with suggested mitigation incorporated would not result in a disproportionate impact to low-income and minority populations. This analysis satisfies State Water Resources Control Board (State Water Board) obligations to consider environmental justice principals pursuant to Government Code section 65040.12.

2.0 INTRODUCTION

Title VI of the federal Civil Rights Act of 1964 requires that no person, because of race, color, religion, national origin, sex, age, or handicap, be excluded from participation in, be denied benefits of, or be subjected to discrimination by any federal aid activity. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, issued in February 1994, requires that disproportionately high and adverse health or environmental impacts to minority and low-income populations be avoided or minimized to the extent feasible.

California law defines Environmental Justice as “the fair treatment of people of all races, cultures and income with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies” (Government Code section 65040.12 and PRC section 72000). The statute requires that California state agencies consider environmental justice in their decision-making process if their actions have an impact on the environment, environmental laws, or policies. The statute also requires that California State Agencies promote enforcement of all health and environmental status within their jurisdiction in a manner that ensures the fair treatment of all Californians, irrespective of race, culture and income. As a whole, California’s statutory environmental justice framework demonstrates a public policy in which governmental activities that affect human health or the environment should be conducted in a manner that considers the most vulnerable populations, and ensures that environmental justice principles are adhered to.

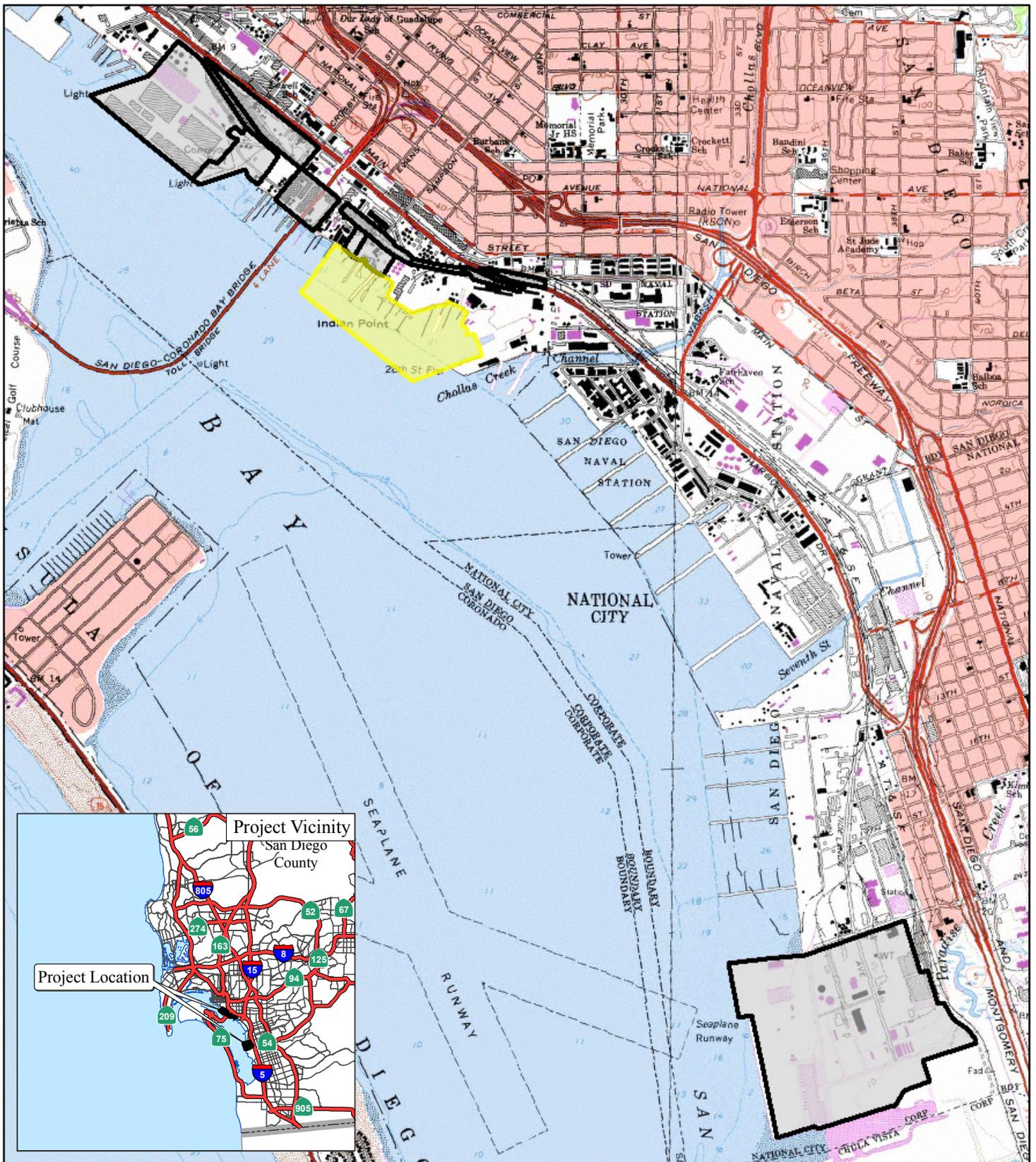
The proposed Shipyard Sediment Remediation Project (proposed project) is the dredging of sediment adjacent to shipyards in the San Diego Bay, including the dewatering and treatment of the dredged material (onshore or on a barge), the potential treatment of decanted water (with anticipated disposal to 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 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 the optional staging sites comprise the project site for the purpose of the PEIR.

3.0 PROJECT LOCATION AND DESCRIPTION

The study area for the sediment removal project (also referred to as the Shipyard Sediment Site in the Draft Technical Report [DTR] for Tentative CAO No. R9-2011-0001, 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 DTR for the Tentative CAO) 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 1, Project Location).

The removal of the marine sediments will require upland areas for dewatering, treatment, 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 review of aerial photographs:

- **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:** San Diego Gas and Electric Company (SDG&E) Leasehold/BAE Systems Leasehold/BAE Systems and National Steel and Shipbuilding Company (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)



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LEGEND

- Shipyards Sediment Project Site
- Potential Sediment Staging Areas

FIGURE 1

Shipyards Sediment Remediation Project
Project Location

SOURCE: USGS 7.5' Quad - National City (1975), Point Loma (1994). CA
R:\SWB1001\GIS\Figure1.mxd (5/5/2011)

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.

3.1 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, 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 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, generally consisting of a vertical sheet pile bulkhead and a 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, treatment, 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, 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.

3.2 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, which 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 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 Board's 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 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.

3.3 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.

3.4 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 and the potential ship traffic.

The project includes the 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 analysis for the technical studies and PEIR. Both scheduling options would be followed by a period of postremedial monitoring as required by the Tentative CAO.

3.4.1 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 prevent resuspended particles from migrating outside of the active dredging area. A double floating silt curtain will be used: an outer silt curtain surrounding the remediation site, and a silt curtain around the active dredging unit.

The floating silt curtain will be comprised of connected lengths of geotextile fabric to 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 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 it has loosened from its supports.

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).¹

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 eel grass.

¹ 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.

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 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.

3.4.2 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 if necessary to prevent infiltration. An asphalt pad will then be constructed. The drying area will be surrounded by K-rails and sealed with foam and impervious fabric to form a confined area.

The dredged sediment, depending upon physical characteristics, will either be off-loaded from the materials barge by an excavator and put into dump trucks for placement in the staging area or treated with a cement-based reagent (pozzolamics) in the barge, then off-loaded into trucks for placement in the staging area for curing and sampling. In either event,

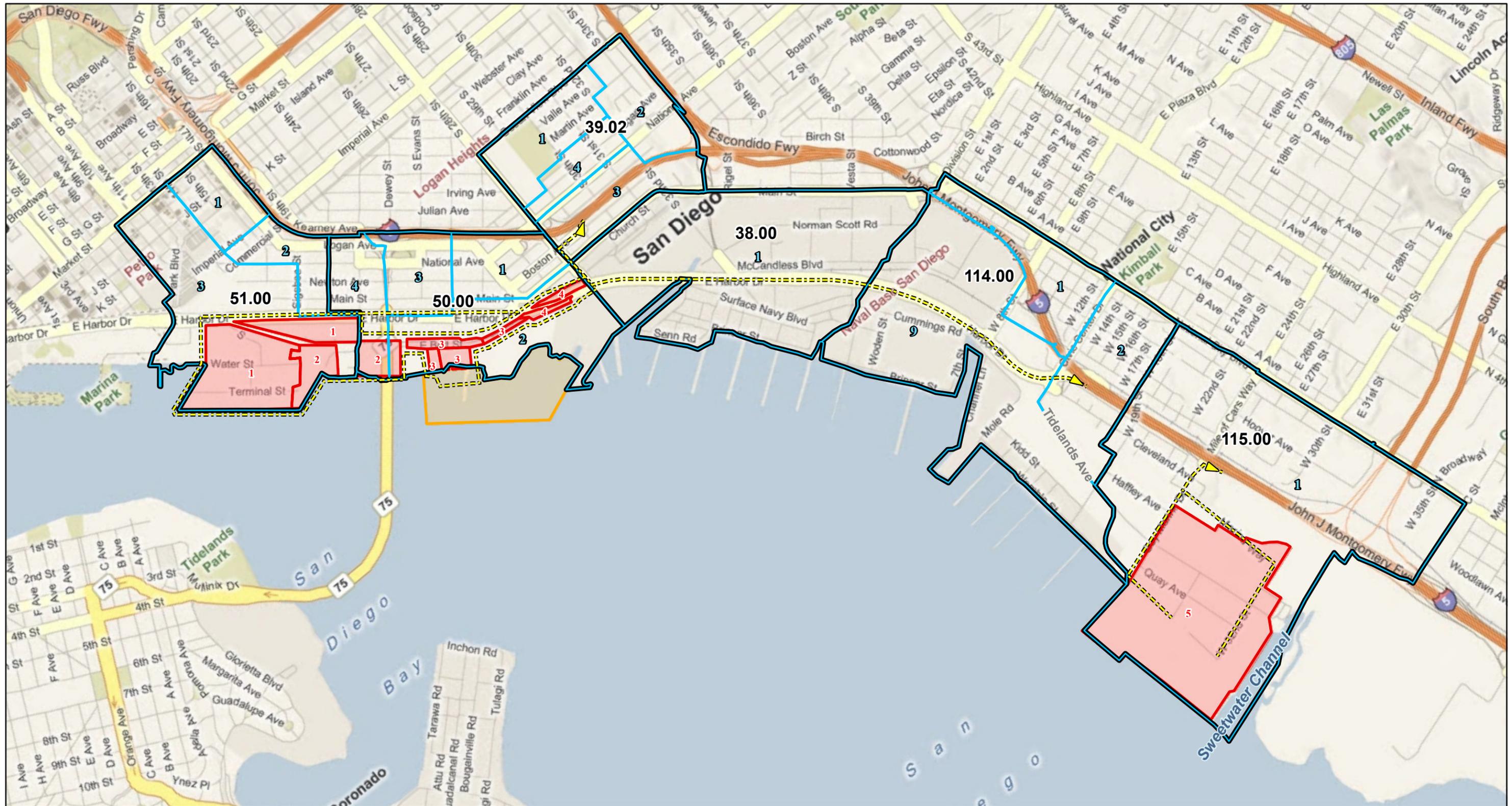
the sediment will then be mixed with pozzolanics to accelerate the drying and to bind the sediment. The sediment will be spread out and rotated frequently to further accelerate the drying process. The drains located in the drying area will be isolated from the rest of the storm water system at the site. It is anticipated that the decanted water will be disposed of to 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.

3.4.3 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, 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), most likely 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 standard metric 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 untreated 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.

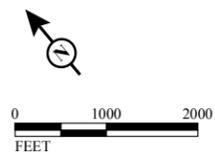
Trucks departing from potential Staging Areas 1 through 4 would access Interstate 5 (I-5) south via East Harbor Drive and 28th Street. Trucks departing from Staging Area 5 would access I-5 south either directly from Bay Marina Drive or from West 32nd Street to Marina Way to Bay Marina Drive. The most direct route to Otay Landfill is via I-5 south to State Route 54 (SR-54) east, to Interstate 805 (I-805) south (Figure 2).



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- 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 2

Shipyard Sediment Remediation Project
Study Area Census Tracts and Haul Routes

3.5 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 California Coastal Commission (CCC) (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 [FESA]), the Air Pollution Control District (APCD), the United States Coast Guard (USCG), and the California State Lands Commission (CSLC). The Port District has land use authority for the potential staging areas and has delegated jurisdiction from the CCC to issue CDPs. The 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 A for a list of discretionary and permit approvals required for project implementation.

The 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 A: Discretionary Permits and Approvals

Discretionary Permits/Approvals	Agency
Final CAO Approval/Remedial Action Plan Approval	San Diego Water Board
PEIR Certification	San Diego Water Board
Project Approval	San Diego Water Board CCC CSLC (consultation)
CWA section 404 Permit and section 10 of the Federal Rivers and Harbors Appropriation Act of 1899 Permit	ACOE USCG (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

CCC = California Coastal Commission

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

USCG = United States Coast Guard

U.S. FWS = United States Fish and Wildlife Service

WDRs = Waste Discharge Requirements

4.0 AFFECTED ENVIRONMENT

4.1 LAND USE CHARACTERISTICS

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, treatment, 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

4.1.1 Staging Areas 1 through 4 – 28th Street Haul Route

Land use designations adjacent to the 28th Street Haul Route, including portions of Harbor Drive, consist of Parking Lots and Transportation, Industrial, Warehouse/Storage, Office, Hotel/Motel, Commercial, Marine Terminal, and smaller areas of multi-family Residential designations. These land use designations are consistent with existing uses. Zoning districts for this route include: Barrio Logan Planned District, Redevelopment Subdistrict, and Subdistrict D; Centre City Planned District (awaiting CCC approval), and IH-2-1.

4.1.2 Staging Area 5 – National City Haul Route

The National City Combined General Plan/Zoning Map designations for this area include combinations of Tidelands Manufacturing, Medium Manufacturing, Planned Development, Coastal Zone, San Diego Unified Port District, Commercial Tourist, and Open Space designations. These designations are consistent with existing land uses.

4.1.3 Harbor Boulevard/Civic Center Drive Haul Route

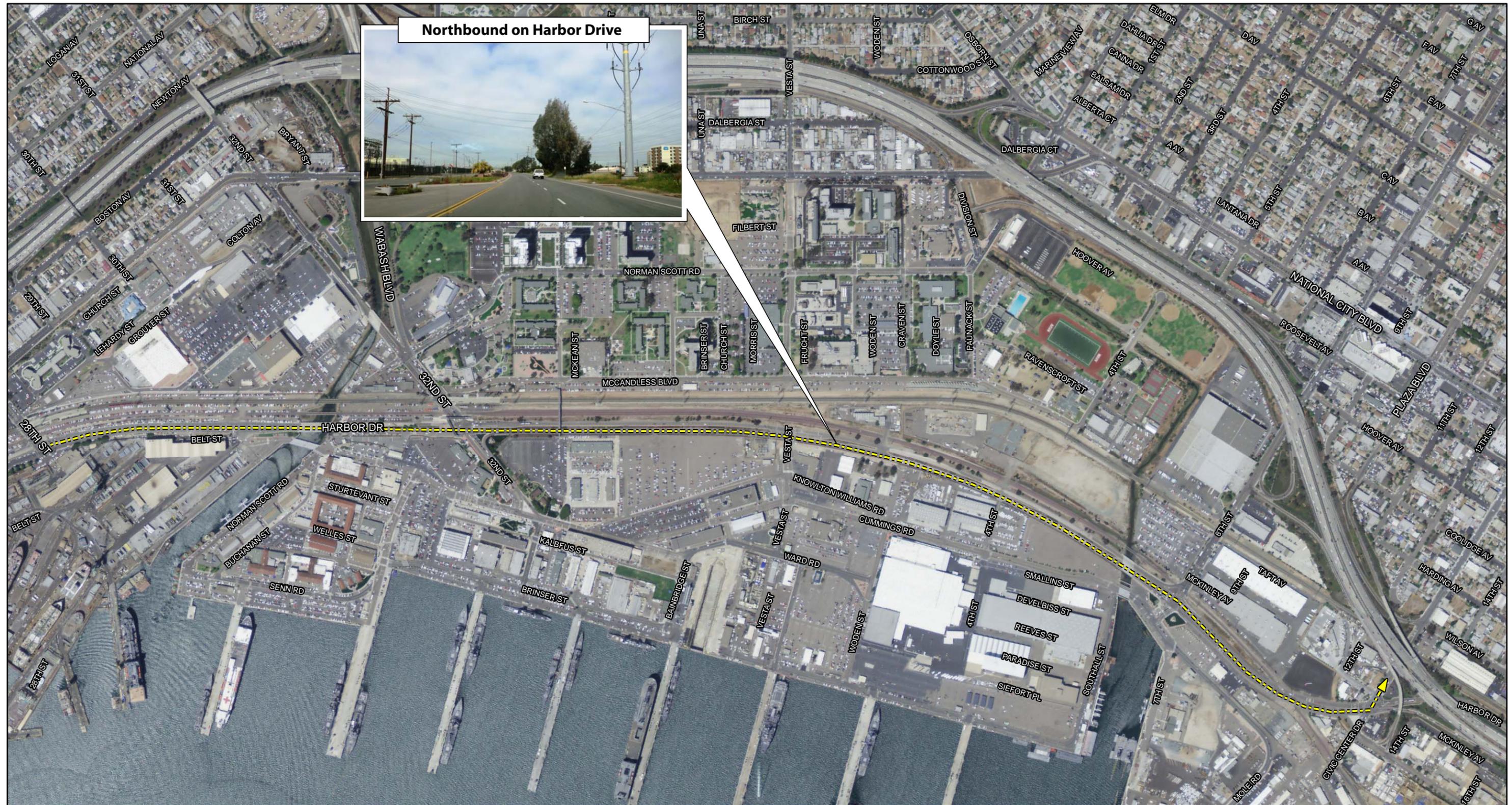
The Harbor Boulevard/Civic Center Drive Haul Route (Figure 3, Mitigation Haul Route) was identified as an alternative haul route for traffic impact mitigation purposes. Land use designations adjacent to the Civic Center Drive Haul Route, including portions of Harbor Drive consist mainly of Transportation and Military designations. General Plan designations for this route are included in the National City Combined General Plan/Zoning Map and include Military Reservation, a small portion of Light Manufacturing, and Coastal Zone designations. The land uses designations are consistent with existing uses.

For the purpose of this report, non-industrial land uses, which may be considered sensitive with regard to environmental justice, are determined to be residential areas, parks, and recreational areas that occur directly adjacent to haul routes and may be subjected to potential adverse impacts resulting from project activities. Non-industrial land uses are identified in Figures 4a and 4b. Potentially sensitive land uses were identified during a site visit in February 2011 and by using aerial photographs. Non-industrial land uses with potential sensitivity within the City of San Diego include Cesar Chavez Park, located near Staging Area 2; Chicano Park, located at the base of the Coronado Bridge near the potential haul route; and a residential area located along the haul route at Boston Avenue. Existing potentially sensitive (i.e., non-industrial) land uses in National City that are associated with Staging Area 5 include the Paradise Marsh viewing platform and passive recreational area, Pier 32 Marina, Pepper Park, and the Boat Launching Facility. These potentially sensitive land uses are all located adjacent to Staging Area 5 and the associated haul route along Bay Marina Way and Bay Marina Drive.

4.2 SOCIOECONOMIC ENVIRONMENT

The environmental justice analysis was conducted using census tract-level and census block-level information from the 2000 Census for the project study area (Figure 2). The type of census data needed for this level of analysis is currently only available from the 2000 Census. This data for the 2010 Census has not been released in its entirety, and portions are not publicly available; therefore, for consistency in comparing data across census tracts, the 2000 Census data was utilized in this analysis. The following analysis provides a comparison of several measures with which to evaluate environmental justice:

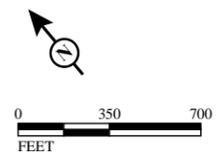
- Percentage of non-White residents
- Percentage of Hispanic residents (the Census Bureau considers Hispanic or Latino ethnicity distinct from racial background)
- Income
- Percentage in poverty by household



LSA

LEGEND

- Potential Sediment Staging Areas
- Shipyard Sediment Project Site
- Potential Haul Routes



SOURCE: NAIP Imagery (2009)

R:\SWB1001\GIS\HaulRoute_c.mxd (4/1/2011)

FIGURE 3

San Diego Sediment Removal Project
 Environmental Justice Analysis
 Potential Alternate Haul Route

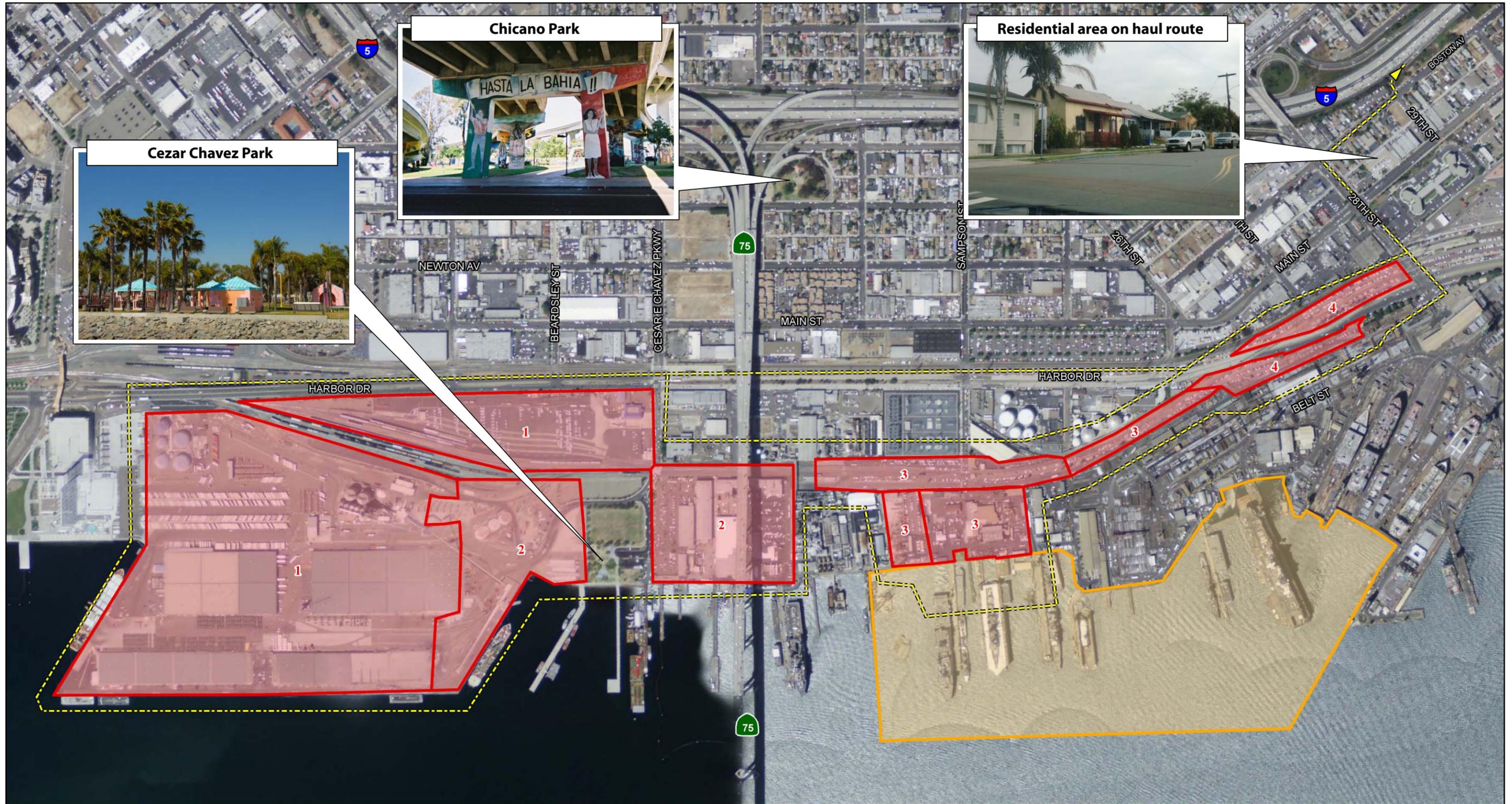
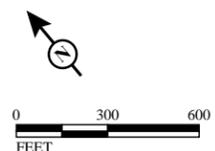


FIGURE 4a

LSA

LEGEND

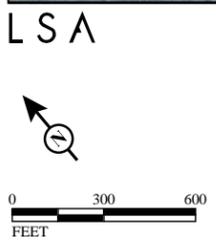
- Potential Sediment Staging Areas
- Shipyard Sediment Project Site
- Potential Haul Routes



SOURCE: NAIP Imagery (2009)

R:\SWB1001\G\Sensitive Receptors_HR-A.ai (5/23/2011)

San Diego Sediment Removal Project
 Environmental Justice Analysis
 Potentially Sensitive Receptors



- LEGEND**
- Potential Sediment Staging Areas
 - Shipyard Sediment Project Site
 - Potential Haul Routes

SOURCE: NAIP Imagery (2009)
I:\SWB1001\G\Sensitive Receptors_HR-B_v2.ai (5/23/2011)

FIGURE 4b

San Diego Bay Sediment Removal Project
Environmental Justice Analysis
Potentially Sensitive Receptors

- Percentage in poverty by population
- Median household income

The focus of this report is on Census Tracts 38.00, 39.02, 50.00, 51.00, 114.00, and 115.00 (Figure 2). The Census Tracts are further divided into focused census blocks, with the exception of Census Tract 38.00 and Census Tract 115, which are single units and are not further divided by the U.S. Census Bureau.

4.2.1 Population

The population within the census tracts in the project study area are summarized in Table B and range from 7,343 in Census Tract 38.00 to 315 residents in Block 1 of Tract 114.00 (with the exception of a non-residential area of Block 2 in Tract 51.00). As depicted in Figure 2, census tract information associated with the 28th Street Haul Route includes Census Tracts 50.00, 51.00, 38.00, and a small portion of Tract 39.02. The largest total population is within Census Tract 38.00, which has a total population of 7,343. Census Tracts 50.00, 51.00, and 39.02 had populations that totaled 2,529, 3,600, and 5,262, respectively.

Table B: Population

Tract Number	38.00	39.02	50.00				51.00		114.00			115.00
Block Number	1	3	1	2	3	4	2	3	1	2	9	1
Population by Block Number	7,343	1,153	1,657	1,478	974	837	n/a*	1,377	315	2,784	915	259

* Non-residential area

The Staging Area 5/National City Haul Route is situated entirely within Census Tract 115.00, which has a total population of 259.

The Harbor Boulevard/Civic Center Haul Route option is situated within Census Tracts 38.00 and 114.00. As stated previously, Census Tract 38.00 has the largest total population with 7,343 residents. Tract 114.00 has a total population of 4,462.

Based on 2000 Census data, the City of San Diego population is recorded at 1,223,400. The population in National City is 54,260 and the entire County of San Diego population is 2,813,233.

4.2.2 Ethnic Composition

Within the project study area, the Hispanic population varies from 93 percent of the population within Blocks 3 and 4 of Tract 50.00 to 16 percent of the population within Census Tract 38.00. The Non-White population ranges from 67 percent in Block 3 of Tract

50.00 to 38 percent in Census Tract 38.00. As depicted in attached Figure 2, the 28th Street Haul Route, which is associated with Staging Areas 1 through 4, is situated adjacent to several census tracts (and blocks). The 28th Street Haul Route conveys traffic to the east on Harbor Drive, through Census Tracts 51.00, 50.00, 38.00, and a small portion of 39.02. The percentages of Non-White residents in Census Blocks 2 and 3 within Census Tract 51.00 are 44 percent and 47 percent, respectively. Hispanic population percentages in these census blocks are 44 percent and 26 percent, respectively. The percentages of Non-White residents in Census Blocks 1, 2, and 4 within Census Tract 50.00 are 61 percent, 0 percent, and 51 percent, respectively. Hispanic population percentages in these census blocks are 85 percent, 0 percent, and 93 percent, respectively. There is no residential population in Census Block 2 of Census Tract 50.00. The area overlapping Census Block 2 is mainly occupied by parking and shipyard operations. The Non-White population percentage within Census Tract 38.00 (no census block division) is 38 percent with a Hispanic population percentage of 16 percent. The Non-White population percentage within Census Block 3 of Census Tract 39.02 is 59 percent, and the Hispanic population percentage is 85 percent. Characterizing the population characteristics along the possible haul routes is difficult because of the mixed land use pattern represented by relatively small pockets of residential land use. The average of the Non-White population in all census blocks that overlap 28th Street Haul Route is 46 percent and the average Hispanic population for this haul route is 55 percent.

The National City Haul Route associated with Staging Area 5 is situated within Census Tract 115.00, with a population that is 54 percent Non-White and 86 percent Hispanic.

The Harbor Boulevard/Civic Center Mitigation Haul Route (depicted on Figure 4), which is the potential alternate haul route, is situated within Census Tracts 38.00 and 114.00. Census Tract 38.00 is composed of a 38 percent Non-White population and a 16 percent Hispanic population. Census Blocks 1 and 9 within Census Tract 114.00 are composed of a 46 percent Non-White and 87 percent Hispanic population, and a 44 percent Non-White and 19 percent Hispanic population, respectively. The average Non-White population in all census blocks that overlaps the Harbor Boulevard/Civic Center Haul Route is 43 percent, and the average Hispanic population for this area is 41 percent.

The City of San Diego has a 42 percent Non-White population and a 25 percent Hispanic population. National City has a 67 percent Non-White population and a 59 percent Hispanic population. The County of San Diego's Non-White population is 36 percent and its Hispanic population is 27 percent.

Table C depicts the ethnic composition of the census tracts and blocks within the project study area. All potential haul routes are relatively comparable in terms of ethnic composition. Table D summarizes population characteristics for the two possible haul routes for Staging Areas 1 through 4, and Table E summarizes population characteristics for the National City Haul Route. When the population characteristics of the census tracts where the

haul routes are located are compared to the applicable City and County averages, the project area census tracts have a higher percentage of Non-White and Hispanic population.

Table C: Population Characteristics

Tract Number	38.00	39.02	50.00				51.00		114.00			115.00
Block Number	1	3	1	2	3	4	2	3	1	2	9	1
Hispanic Population	16%	85%	85%	N/A ¹	93%	93%	44%	26%	87%	84%	19%	86%
Non-White Population	38%	59%	61%	N/A	67%	51%	44%	47%	46%	43%	44%	54%

¹ Non-residential area
N/A = not applicable

Table D: Population Characteristics – Haul Routes for Staging Areas 1 through 4

	28th Street Haul Route	Mitigation Haul Route	City of San Diego Average	County of San Diego Average
Non-White	46%	43%	42%	36%
Hispanic	55%	41%	25%	27%

Table E: Population Characteristics – Haul Route for Staging Area 5

	National City Haul Route	National City Average	County of San Diego Average
Non-White	54%	67%	36%
Hispanic	86%	59%	27%

4.2.3 Poverty and Income

Table F depicts percentage of residents in poverty by both population and by household as well as median income. The 28th Street Haul Route, the National City Haul Route, and the Harbor Boulevard/Civic Center Haul Route pass through areas that are relatively comparable in terms of poverty levels. Data is not available for Census Tract 38.00. The remaining census tracts range from a high of 58 percent in poverty (by population) within Block 2 of Tract 51.00 to the lowest percentage of poverty by population at 15 percent within Block 1 of Tract 114.00. The median household income within the project study area is \$12,868. The highest median household income occurs within Block 1 of Tract 50.00, and the lowest occurs within Block 3 of Tract 51.00.

Table F: Poverty and Income

Tract Number	38.00	39.02	50.00				51.00		114.00			115.00
Block Number	1	3	1	2	3	4	2	3	1	2	9*	
% in Poverty (by Population)	— ^{1*}	42%	46%	N/A ²	30%	45%	58%	55%	15%	38%	—	34%
% in Poverty (by Household)	—	34%	34%	N/A	31%	27%	24%	42%	27%	33%	—	35%
Median Household Income	—	\$20,335	\$24,327	N/A	\$23,047	\$12,135	\$13,917	\$9,208	\$25,714	\$23,000	—	\$20,938

¹ Data not available

² Non-residential area

N/A = not applicable

The average percentage in poverty by population for the census blocks that overlap the 28th Street Haul Route is 45 percent and the average median household income in this area is \$17,162.

The average percentage in poverty by population for the National City Haul Route is 34 percent (35 percent by household) with a median household income of \$20,938.

The average percentage in poverty by population for the census blocks that overlap the Harbor Boulevard/Civic Center Haul Route cannot be calculated accurately because data are not available for the Census Tract 38.00 and Census Block 9 of Tract 114.00. The remaining data (for within Census Block 1 of Tract 114.00) depict the lowest poverty levels with 15 percent of the population in poverty and a median household income of \$25,714.

By comparison, the City of San Diego average percentage in poverty by population is 15 percent (11 percent by household) with a median household income of \$53,060. National City’s average percentage in poverty by population is 22 percent (20 percent by household) with a median household income of \$31,479. The County of San Diego’s average percentage in poverty by population is 15 percent (9 percent by household) with a median household income of \$55,438.

Table G summarizes poverty and income characteristics for the two possible haul routes for staging Areas 1 through 4, and Table H summarizes poverty and income characteristics for the National City Haul Route. When the poverty and income characteristics of the census tracts where the haul routes are located are compared to the applicable City and County averages, the project area census tracts have a higher percentage of poverty and lower median household incomes.

Table G: Poverty and Income – Haul Routes for Staging Areas 1 through 4

	28th Street Haul Route	Mitigation Haul Route	City of San Diego Average	County of San Diego Average
% Poverty by Population	46%	N/A	15%	15%
% Poverty by Household	32%	N/A	11%	9%
Median Household Income	\$17,162	\$25,714	\$53,060	\$55,438

Table H: Poverty and Income – Haul Route for Staging Area 5

	National City Haul Route	National City Average	County of San Diego Average
% Poverty by Population	34%	22%	15%
% Poverty by Household	35%	20%	9%
Median Household Income	\$20,938	\$31,479	\$55,438

4.2.4 Potential Adversely Affected Community from Consumption of San Diego Bay Fish

People in the project vicinity catch and consume fish and shellfish from San Diego Bay. The San Diego Bay Health Risk Study conducted in 1990, referred to in the DTR for Tentative CAO No. R9-2011-0001 (September 15, 2010), reported that 74 percent of people who catch and consume fish from San Diego Bay are people of color. The 1990 study reported that the consumption patterns of ethnic populations indicate that they tend to eat more fish in their diet and eat parts of fish that have higher pollutant accumulation. This group of ethnic anglers and their family members have a disproportionately higher health risk from pollution in San Diego Bay than other people catching and consuming fish and shellfish in the bay.

The County of San Diego’s 1990 report, San Diego Bay Health Risk Study, identified the demographics and consumption patterns of people in the San Diego region who catch and consume fish from San Diego Bay. Three hundred and sixty nine (369) anglers (people who catch fish with a hook) were surveyed over a period of 1 year from October 1988 through October 1989. The survey was used to:

- Identify the species of fish most commonly caught by anglers of San Diego Bay;
- Identify the demographics of the population of anglers who catch fish; and
- Characterize the fish consumption patterns of the anglers and others who may consume fish.

The San Diego Bay angler interview locations selected by the CDFG included Glorietta Bay, Coronado Ferry Landing, Shelter Island, Harbor Island, Spanish Landing, Embarcadero Park, Sweetwater Port District, the City of Chula Vista Bayside Park, and G Street Pier. Boat launches were also surveyed for anglers returning with their catch from the bay.

The majority of anglers surveyed lived in municipalities adjacent to San Diego Bay. Table I, from the DTR for the Tentative CAO, provides a breakdown of the anglers’ place of residence.

Table I: Anglers’ Reported Place of Residence

Residence	Percent of Total Anglers Interviewed ¹
City of San Diego	50.7%
City of Chula Vista	10.6%
City of National City	8.1%
San Diego County	15.9%
Outside San Diego County	3.5%
Undetermined	11.1%

¹ Data from County of San Diego (1990) Table IV-D, Demographic Profile of 369 Anglers.

Five distinct ethnic subpopulations were identified as constituting significant portions of the interviewed anglers: Caucasian, Filipino, Hispanic, Asian (Vietnamese, Laotian, Japanese, Cambodian, Chinese, Korean, and Thai) and Black. Table J provides a comparison of fishing patterns for the ethnic populations surveyed.

Table J: Comparison of Fishing Patterns By Ethnicity

Ethnicity	Percent of Total Anglers ¹	Fishing Frequency (Times per Month) ²	Percent of Anglers that Caught and Ate Fish	Average Yield (grams of fish/successful trip) ³	Percent of Anglers who Fish Year Round
Caucasian	42.0%	7.3	37.2%	1,028	78.9%
Filipino	20.1%	7.1	73.6%	2,156	60.9%
Hispanic	12.5%	4.5	40.0%	969	52.6%
Asian ⁴	11.1%	4.8	87.9%	1,791	38.7%
Black	6.5%	3.9	38.9%	1,896	79.2%
Other Ethnic Groups ⁵	2.2%	7.3	50.0%	767	62.5%
Unidentified	5.6%	NC	100.0%	326	NC
Total Population	100%	6.4	53.4%	1,504	67.8%

Source: Draft Technical Report for Tentative Cleanup and Abatement Order No. R9-2011-0001.

¹ County of San Diego (1990) Table 1V-D, Demographic Profile of 369 Anglers.

² A 30-day month was assumed.

³ Based on interviews only where catch was consumed.

⁴ Group includes Vietnamese, Laotian, Japanese, Cambodian, Chinese, Korean, and Thai.

⁵ Group includes Indian, American Indian, Hawaiian, and Polynesian.

NC= Not calculated

As presented in the DTR for the Tentative CAO No. R9-2011-0001, the County of San Diego (1990) drew the following conclusions from the data in Table J above:

- Caucasians and Filipinos were the most frequent anglers at 7.3 and 7.1 times per month, respectively. Asians, Hispanics and Blacks were less frequent at 4.8, 4.5, and 3.9 times per month.
- Filipinos caught and consumed fish 73.6 percent of the time while Asians caught and consumed fish 87.9 percent of the time. Caucasians, Hispanics, and Blacks all caught and consumed fish 40 percent or less of the time. This may indicate that Filipinos and Asians, more than other populations, are fishing in San Diego Bay for food rather than sport.

- In terms of average yield of fish in grams per successful trip (when fish were caught), Filipinos and Asians tended to be more successful than other portions of the population at 2,156 grams and 1,791 grams per successful trip, respectively.
- In terms of the percentages of each population that fish year round, Blacks and Caucasians had the highest percentages at 79.2 percent and 78.9 percent, respectively. Values for other populations ranged from a low of 38.7 percent for Asians to a high of 60.9 percent for Filipinos. These values are difficult to interpret because they do not contain any indication of what portion of the year was fished.

The County of San Diego also evaluated patterns of consumption by ethnicity and the distribution of risk between ethnic groups. The results are summarized in Table K.

Table K: Comparison of Consumption Patterns by Ethnicity

Ethnicity	Percent of Total Consumers¹	Percent of Total Measured Catch²	Projected Percent of Total Catch²	Consumption Rate (grams/day)³
Caucasian	24	24.6	37.8	10.8
Filipino	32.6	39.0	28.7	49.5
Asian ⁴	25.6	22.8	16.4	81.9
Hispanic	8.9	5.7	5.5	23.6
Black	4.7	6.5	9.7	NC
Other Ethnic Groups ⁵	2.2	1.4	1.9	NC
Total	100	100	100	31.2

Source: Draft Technical Report for Tentative Cleanup and Abatement Order No. R9-2011-0001.

¹ This distribution is based on a sample size of 143 interviews, representing 490.5 potential consumers.

² These percentages represent only catch that was indicated would be consumed. These calculations assume that successful anglers not represented in the measured catch are catching fish at the same rate as those who are represented.

³ Consumption rates calculated using the following factors: fish weight, a cleaning factor, number of consumers, and fishing frequency.

⁴ Group includes Vietnamese, Laotian, Japanese, Cambodian, Chinese, Korean, and Thai.

⁵ Group includes Indian, American Indian, Hawaiian, Polynesian, and Unidentified.

NC = not calculated (sample sizes for these groups are insufficient to allow calculations of consumption rates)

County of San Diego drew the following conclusions from the data presented in Table K and other data contained in the 1990 report:

- Filipinos were determined to represent 32.6 percent of the total consumers in spite of the fact that they comprise only 20.1 percent of all anglers. Although Asians represent only 11.1 percent of the total anglers, 25.6 percent of the total consumers were Asian. Caucasians were determined to represent only 24 percent of the total consumers in spite of the fact that they comprise only 42 percent of all anglers. Hispanics and Blacks made up only 8.9 percent and 4.7 percent of the totals consumers, respectively.

- Caucasians were projected to consume 37.8 percent of the total consumed fish catch. Filipinos and Asians were projected to consume 28.7 percent and 16.4 percent of the total consumed fish catch, respectively. Blacks and Hispanics were projected to consume the smallest portion of the total consumed fish catch at 9.7 percent and 5.5 percent, respectively. While these estimates give some indication of the relative portion of total contaminated fish ingested by each group, it is important to note that other factors, such as the parts of a fish consumed, may influence the actual amount of contaminants consumed.
- The fish consumption rate of 10.8 grams/day for Caucasians is considerably lower than the 31.2 grams/day determined for the entire population. The fish consumption rates for Filipinos, Asians, and Hispanics were considerably higher than the Caucasian fish consumption rate. However, limitations on population sample sizes, especially for Hispanics and Asians, make comparisons of the consumption rates problematic.¹

Individuals that consume a greater portion of the fish, such as its internal organs, may be at greater risk of consuming a greater amount of contaminants. Other data contained in the study indicates there were significant variations between ethnic populations in the parts of fish consumed. Only 5.6 percent of Caucasian anglers consumed the entire fish and 66.7 percent eat only the muscle. Approximately 40 percent of both Filipinos and Asians consume the entire fish. This means that on average, a given amount of fish consumed may result in a lower amount of ingested contaminants for Caucasians as compared to Filipinos and Asians.

Another study, *Survey of Fishers on Piers in San Diego Bay*, published in 2005 established that a significant subset of San Diego Bay fishers regularly catch and eat fish from the piers near contaminated areas of San Diego Bay. The Environmental Health Coalition (EHC), a nonprofit environmental justice organization, has expressed concerns that disproportionate health impacts of the contamination are borne by the low-income communities of color that catch and eat fish from San Diego Bay. The EHC² conducted what they classified as an “opportunity” sample survey in 2004 of people fishing from piers near the Shipyard Sediment Site, Naval Station San Diego, and in the south end of San Diego Bay to ensure the interests of this population were considered in the Tentative CAO decision-making process. The EHC described the survey group as a “...selective sample that is highly exposed to fish from near the shipyards, Naval Station San Diego, and the southern portion of San Diego Bay.”

¹ The fish consumption rates for Caucasians were estimated based on an interview sample size of 20 or more. The consumption rates for Asians and Hispanics were based on an interview sample size of 4 and 5 interviews respectively, and should only be considered an approximation of the actual consumption rates for those groups.

² The EHC is a self-described non-profit environmental justice organization in San Diego dedicated to the prevention and cleanup of toxic pollution, monitoring actions causing pollution and educating communities about toxics.

The EHC reported that a total of 109 fishers were interviewed in English, Spanish, or Tagalog, as appropriate, during the winter and spring of 2004. Piers surveyed by EHC included the following:

Table L: Piers Surveyed

Fishing Pier	Approximate Miles from Shipyard Sediment Remediation Site
Convention Center (downtown San Diego)	1.7
Pepper Park Pier (National City)	3.2
Chula Vista Pier	5.1

According to the EHC, of all of the fishers surveyed, the places of residence supplied by the interviewees were as follows:

- 83 percent lived in EHC target communities such as the following:
 - National City (59 percent)
 - Barrio Logan (14 percent)
 - Western Chula Vista and Imperial Beach (10 percent)
 - Seven percent (7 percent) lived in Tijuana, Mexico
- 96 percent of the fishers surveyed were people of color and consisted of the following ethnic groups:
 - 7 percent Latino
 - 39 percent Filipino
- Of the surveyed fishers, the fishing patterns consisted of the following:
 - 58 percent fished at least once a week
 - 25 percent fished daily
- Almost two-thirds (61 percent) of the fishers reported they eat the fish they catch and 2 percent give the fish away.
- Of the surveyed fishers, 78 percent have children and 41 percent of those children eat fish caught from San Diego Bay.
- 13 percent of the fishers surveyed reported eating fish skin, among them people who fish frequently and who catch large amounts of fish.
- Of the fishers surveyed, 73 percent eat other types of seafood in addition to what they catch.

The San Diego Water Board recognizes that there are limitations to the EHC Survey. The survey was not a representative sample of all San Diego Bay fishers or all South Bay residents. The survey assumed income based on place of residence and the appearance that someone appeared to be engaged in subsistence fishing.

In the short-term, the implementation of the sediment remediation project has the potential to affect water quality, hazardous materials in the water column for the project area, and marine life. Double silt curtains and other project features and mitigation measures will reduce impacts to water quality and help to ensure that the proposed remediation project would not impair the beneficial uses of San Diego Bay, including those uses for which minority and/or low-income populations may participate in, such as recreational boating and fishing. The short term hazards and water quality impacts are less than significant with mitigation incorporated. Double silt curtains and other project features and mitigation measures will protect areas outside the immediate work area. Implementation of the proposed project will not result in any long-term adverse effects and beneficial effects of the remediation would be enjoyed by all users of San Diego Bay. Furthermore, it is anticipated that, once completed, the proposed project (remedial dredging) will improve the water quality and reduce potential sources of contaminants for marine life, including fish, in San Diego Bay.

5.0 CONCLUSION

Title VI of the federal Civil Rights Act of 1964 requires that no person, because of race, color, religion, national origin, sex, age, or handicap, be excluded from participation in, be denied benefits of, or be subjected to discrimination by any Federal Aid activity. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, issued in February 1994, requires that disproportionately high and adverse health or environmental impacts to minority and low-income populations be avoided or minimized to the extent feasible.

California law defines Environmental Justice as “the fair treatment of people of all races, cultures and income with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies” (Government Code Section 65040.12 and Public Resources Code Section 72000). The Statute requires that California State Agencies consider environmental justice in their decision-making process if their actions have an impact on the environment, environmental laws, or policies. The Statute also requires that California State Agencies promote enforcement of all health and environmental status within their jurisdiction in a manner that ensures the fair treatment of all Californians, irrespective of race, culture, and income. As a whole, California’s statutory environmental justice framework demonstrates a public policy that governmental activities that affect human health or the environment should be conducted in a manner that considers the most vulnerable populations, and ensures that environmental justice principles are adhered to.

The State Water Resources Control Board is a California Environmental Protection Agency (CalEPA) department. Its mission is to preserve and enhance the quality of California’s water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. CalEPA’s stated mission, as described in its 2004 Intra-Agency Environmental Justice Strategy, is as follows:

“...to accord the highest respect and value to every individual and community, by developing and conducting our public health and environmental protection programs, policies, and activities in a manner that promotes equity and affords fair treatment, accessibility, and protection for all Californians, regardless of race, age, culture, income, or geographic location. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.”

Based on the available data presented in this report, the two routes studied in the City of San Diego (the 28th Street Route and the Harbor Boulevard/Civic Center Drive Route), and the National City route (Staging Area 5), have similar socioeconomic characteristics. Therefore, population characteristics along the haul routes are not a distinguishing characteristic for the purpose of selecting a staging area. Residents and other sensitive land uses/receptors along the routes would be exposed to construction traffic associated with the haul of dredge materials. A Health Risk Analysis (LSA Associates, Inc., May 2011) indicates that the emissions along all three proposed haul routes would not result in a significant health risk. The Harbor Boulevard/Civic Center Drive route would have reduced health risk compared to the 28th Street Route due to the absence of sensitive land uses/sensitive receptors in the areas immediately adjacent to the route.

In conclusion, although there is a high percentage of low-income and minority populations in the project study area, the proposed project impacts are less than significant with mitigation incorporated; therefore, the proposed project (including alternative staging areas and haul routes) would not result in disproportionately high and adverse health or environmental impacts to minority and low-income populations. The proposed project impacts related to health risk (toxic air contaminants) and noise are less than significant. The proposed project impacts related to water quality, hazardous materials, and marine biology are less than significant with mitigation incorporated. The proposed project impacts related to traffic are reduced to less than significant with implementation of an alternative haul route. There are residences along a portion of the proposed project haul route; however, there are no residences immediately adjacent to the mitigation haul route.

The proposed project impacts related to air quality are significant and unavoidable for the proposed project and for the project alternatives.

In the short-term, the implementation of the sediment remediation project has the potential to affect water quality, hazardous materials in the water column for the project area, and marine life. Double silt curtains and other project features and mitigation measures will reduce impacts to water quality and help to ensure that the proposed remediation project would not impair the beneficial uses of San Diego Bay, including those uses for which minority and/or low-income populations may participate in, such as recreational boating and fishing. The short-term hazards and water quality impacts are less than significant with mitigation incorporated. Double site curtains and other project features and mitigation measures will protect areas outside the immediate work area. Implementation of the proposed project will not result in any long-term adverse effects to marine life, including fish, and beneficial effects of the remediation would be enjoyed by all users of San Diego Bay. Furthermore, it is anticipated that, once completed, the proposed project (remedial dredging) will improve the water quality and reduce potential sources of contaminants for marine life, including fish, in San Diego Bay.

In sum, the proposed project with suggested mitigation incorporated would not result in a disproportionate impact to low-income and minority populations. This analysis satisfies the State Water Board's obligations to consider environmental justice principals pursuant to Government Code section 65040.12.