



## SEDIMENT MANAGEMENT PLAN SAN DIEGO SHIPYARD SEDIMENT SITE – SOUTH SHIPYARD

### **Prepared for**

San Diego Bay Environmental Restoration Fund – South

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## **1 INTRODUCTION**

### **1.1 Purpose**

This Sediment Management Plan (SMP) was prepared by Anchor QEA, L.P., on behalf of the San Diego Bay Environmental Restoration Fund – South (South Trust) and has been reviewed and adopted by the Contractor to maintain Cleanup and Abatement Order (CAO). This Plan satisfies the conditions of CAO No. R9-2012-0024 (Water Board 2012a) and Mitigation Measure 4.3.6 of the Mitigation Monitoring and Reporting Program (MMRP; Water Board 2012b) for the South Shipyard portion of the San Diego Shipyard Sediment Site (Site).

Specifically, this SMP documents best management practices (BMPs) that will be implemented during sediment unloading, transport, drying/dewatering, and disposal operations for the duration of dredging activities. The Contractor will be responsible for implementation of the Plan. This Plan will be provided to the Regional Water Quality Control Board (Water Board) for verification. An updated copy of the SMP will be kept on site at all times throughout construction.

### **1.2 Project Background**

Discharges of metals and other pollutant wastes to San Diego Bay over the years have resulted in the accumulation of pollutants in marine sediments along the eastern shore of central San Diego Bay in San Diego, California. This accumulation resulted in conditions identified by the Water Board as adversely impacting beneficial uses (aquatic life, aquatic-dependent wildlife, and human health).

The Water Board identified the affected areas as including waters adjacent to two adjoining, active shipyard facilities in San Diego Bay—the North Shipyard and the South Shipyard, together termed the Site.

Dredging will be conducted to remove impacted sediments from all accessible portions of the affected areas of the Site. Dredged material will be offloaded to an on-site onshore Sediment Management Area (SMA) where it will be dewatered, loaded into trucks, and transported to one or more off-site disposal locations. Dredging will be completed by mechanical means

and will be supplemented, where necessary, by localized placement of sand cover in cleanup areas (depending on various factors, including results of post-dredge confirmation sampling) as a mechanism for further enhancing the sediment surface. Cleanup areas below overwater structures will receive a cover layer of sand rather than being dredged, owing to accessibility issues and the need to maintain stability of the structures.

An upland SMA is available for dredged material and debris offloading, dewatering, sediment management, haul truck loading, water management, and other staging activities. A portion of the U.S. Department of the Navy (USN) property, commonly referred to as the S-Lane Parcel, is the available SMA for the South Shipyard. The USN is the land owner of the SMA, which has been leased to General Dynamics National Steel and Shipbuilding Company (NASSCO). The South Trust has finalized an access arrangement for use of the property during construction operations.

The SMA measures approximately 620 feet by 115 feet (approximately 1.6 acres) and is located on the north side of Chollas Creek. The area will be free of any structures prior to the Contractor commencing construction. The Contractor will be responsible for installing and maintaining a suitable barrier around the perimeter of the SMA to avoid interference with ongoing shipyard activities (Anchor QEA 2012).

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## **2 MATERIAL HANDLING PROCEDURES**

Operations and BMPs specific to dredging activities can be found in the Basis of Design Memorandum (BODM; Anchor QEA 2013a) and the Dredging Management Plan (Anchor QEA 2013b). Sediment transportation, stockpiling, and offloading are discussed in this section.

### **2.1 Sediment Transport to Sediment Management Area**

Sediment is anticipated to be transported from the dredge to the offloading area by sealed wide pocket haul barges. Ponded water on haul barges must be collected and stored in holding tanks (e.g., Baker tanks) near dredging activities for initial settling and avoidance of barge overflow or pumped directly to water management facilities (either at the SMA or, in order to save space in the SMA, on one or more floating barges). BMPs and Standard Operating Procedures (SOPs) will be employed to contain the turbid water and sediment and ensure they will not make contact with San Diego Bay. See Section 3 for further discussion of water management and treatment.

Transport of haul barges from the location of dredging to the SMA will be coordinated with other vessels and marine activities in the shipyard and adjoining locations. Commercial activities taking place at the shipyard will have precedence over the Contractor's activities. Maintenance dredging is planned but not currently scheduled along the S-Lane waterfront. Additional coordination of vessel traffic with the U.S. Navy will be necessary if maintenance dredging is in progress.

At the offloading area, haul barges will be staged along the seawall within the 500-foot temporary access zone. Sediment will then be offloaded from haul barges using a rehandling bucket, conveyor, or similar system and placed in the designated dewatering portion of the SMA. Alternatively, if additional passive dewatering is not necessary, or if water absorbent additives or cement (in liquid form) are combined with the sediment in the barge, then the sediment may be placed directly into lined trucks for transport to the off-site disposal location, provided that the sediment passes the Paint Filter Liquid Test before leaving the Site.

Spillage or discharge of dredged material into San Diego Bay will not be allowed during transfer of the sediment from the haul barge. A spill apron, consisting of steel plates, plywood platforms, or a similar assembly with secondary containment will be placed between the barge and shore to collect drippings or spillage and direct it back into the barge or upland collection point (e.g., collection sump). The Contractor shall use administrative controls to limit the swing arm of the crane to ensure that sediment does not fall on unprotected areas. Operators will be trained to not swing equipment over unprotected areas.

## **2.2 Sediment Stockpiling**

If necessary, sediment stockpiling activities shall be conducted by the Contractor fully within the SMA limits. The dewatering and stockpiling area shall be enclosed by a suitable barrier (e.g., “Ecology” blocks, K-rails, or similar method) that contains all free water within the area and prevents water from flowing into San Diego Bay or into the underlying ground. If a low permeability liner (e.g., geomembrane) is placed below the dewatering area, the Contractor shall provide an overlying layer of sand or gravel to provide a visual indicator of the location of the liner to prevent a breach in the dewatering pad. As opposed to the above visual indicators, physical barriers may be used to prevent excavator penetration, which may include closely spaced railroad rails or K-rails.

Passive dewatering may be implemented by air-drying action supplemented by regular reworking of sediments and may be accelerated with the use of drying agents. Only liquid or slurried drying agents (i.e., Portland cement slurry or liquid coagulants) will be used. Drying agents in their dry (dust) form will not be used to avoid airborne release of these materials. The Contractor may choose to implement a more active dewatering process involving filter presses or other equipment.

Offshore scows may be used to supplement sediment dewatering operations by providing additional temporary space for dewatering sediments prior to offloading. All scows used on the Site will be water tight to avoid discharge of water to San Diego Bay. Decant water will must be pumped through the water management and treatment system and disposed of in accordance with Section 3.2.

### **2.3 Sediment Offhauling**

Dredged material and debris will be transported by truck for disposal to an upland Subtitle D disposal facility. If hazardous waste is encountered or generated as part of the planned remedial action, then it will require special handling and disposal considerations as outlined in the Hazardous Materials Transportation Plan (Anchor QEA 2013c).

Prior to disposal on any given day, the Contractor shall identify the haul truck load limits, and ensure each load meets those limits prior to hauling. Each driver shall be trained on the specified haul route, site requirements (such as the site speed limit), and safe driving procedures before hauling materials.

Trucks will be loaded within the boundaries of the SMA and will follow the designated truck haul route depicted in the BODM (Anchor QEA 2013a). Prior to sediment being hauled off site, the South Shipyard representative will ensure dredged material passes the Paint Filter Liquid Test to meet acceptance requirements for highway transport and the receiving disposal facility. After conducting and subsequently passing the test, the South Shipyard representative will inform the Contractor of the results.

### **2.4 Truck and Hauling Requirements**

Haul trucks will be washed in a designated, contained area prior to exiting the SMA to prevent transfer of sediment to the surrounding area. Truck decontamination areas will be set up adjacent to the SMA, and a power wash arm will be used to clean sediment from equipment and vehicles. Refer to Section 3.2 for collection and disposition of wash (decontamination) water.

While on site, SMA equipment and haul trucks will be operated in accordance with site requirements and will follow all of City of San Diego ordinances and MMRP Mitigation Measures 4.4, 4.5, and 4.6, which pertain to idling, noise, and air emissions, at all times. In addition, the Contractor will be required to adhere to all regulatory permit conditions required by the City of San Diego, Water Board, U.S. Army Corps of Engineers, and the San Diego Unified Port District.

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### **3 WATER MANAGEMENT**

Decanted water from sediment and any stormwater in the staging area will be managed by sloping the staging area to one or more common sumps or containment cells, or pumped to a series of tanks. The containment device(s) will be designed to meet a performance standard of “no discharge” so that stormwater runoff cannot enter San Diego Bay or adjacent areas and to ensure that stormwater surrounding areas cannot penetrate the containment area. The containment device(s) will be inspected daily during sediment staging. Prior to initial discharge, liquid will be tested to evaluate whether it meets discharge criteria for the San Diego Publically Owned Treatment Works (POTW), and if satisfactory, will be discharged as discussed in Section 3.1. If not, additional treatment will be required prior to discharge.

#### **3.1 Water Generated by Dewatering Activities**

Prior to shipment off site, sediment must be dewatered to a point where it passes the Paint Filter Liquid Test. Water generated during dewatering, as well as stormwater runoff and other water collected within stockpile areas from within the SMA, will be collected on site, possibly through the use of temporary containers or holding tanks. This water will not be discharged until it is demonstrated that volume and quality requirements pertinent to the discharge point.

Given the continuous collection and removal of water from dredged material barges, treatment of water may be needed to keep up with dredging production rates. Treatment may include the use of flocculants/coagulants to increase the efficiency of the water solids settling process. The system may operate continuously throughout construction to collect, treat, and discharge dredging- and project-generated water. If used, an Active Treatment System (ATS) will be positioned either at the SMA or on a floating barge within San Diego Bay near dredging activities to minimize the distance for transporting dredging-generated water and maximize the space at the SMA. Secondary containment for all water treatment chemical storage tanks will be used.

The water may be discharged to the approved sewer utility located at the Site following treatment of the collected water and testing to determine that the treated water is in compliance with requirements of the project permits. Wastewater discharge to the City’s

sewer system will occur at manhole 138 (H24S138) within the SMA boundary. Treated water discharge to the sewer utility may not exceed 250 gallons per minute during dry weather conditions. Treated water shall not be discharged during a rain event of 0.1 inch or greater and must be held until 24 hours after the last rain.

During dewatering operations, in accordance with MMRP Mitigation Measure 4.2.12, the Contractor shall comply with provisions of the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002; SWRCB 2009) as necessary and any subsequent related permit, as it relates to activities conducted in the SMA.

### **3.2 Decontamination Water**

Equipment and vehicles involved in the remedial action will be decontaminated before leaving the property. A decontamination area will be established for small equipment within the SMA to remove all solids and wash the equipment and personal protective equipment that will leave the active work area. Truck decontamination areas will be set up adjacent to the SMA and will be separate from the decontamination areas for personnel and small equipment. A power washer (or similar equipment) will be used to clean sediment from equipment and vehicles to the collection sump. Relatively small quantities of water are expected to be generated from decontamination procedures.

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## **4 DISPOSAL MANAGEMENT**

All hazardous materials (liquid, sediment, or chemicals used during the project) will be handled, transported, and disposed of at the proper disposal facility in accordance with state regulations.

### **4.1 Dredge Material Characterization**

The proposed dredged material has been sampled and analyzed for key chemical parameters based on Otay Landfill's acceptance criteria, and waste characterization profiles have been accepted.

The contact information for the primary landfill is as follows:

Otay Landfill  
1700 Maxwell Road  
Chula Vista, California 91912  
(619) 421-3773

If encountered, hazardous waste will not be transported over public streets until the material is characterized and approved by the receiving landfill.

### **4.2 Treated Wood Waste**

Piles pulled from the dredging area will be stockpiled on site off the ground, by placing on blocks, on concrete surfaces, or in containers. Piles will be stockpiled and disposed of at the primary landfill following the appropriate waste characterization procedures.

### **4.3 Waste Documentation**

Waste acceptance profiles will be obtained prior to transfer of removed materials to the disposal facility. Nonhazardous waste manifests or hazardous waste manifests will be submitted to the landfill(s) with each truck. All local, state, and federal laws will be followed. A waste tracking log will be updated daily.

#### **4.4 Scheduling Landfill Disposal**

The landfill(s) will be contacted by 3:00 PM with the estimated number of truck loads for the following day or with an average number of trucks each day for a given week. The contact information for the primary landfill is listed in Section 4.1.

#### **4.5 Recycling**

Construction debris, such as miscellaneous wood, wood stakes, metal, and plastic, will be recycled to the extent feasible. Other recyclable wastes, such as bottles, cans, cardboard, and paper will be gathered in containers for recycling at an appropriately permitted facility.

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## **5 DUST CONTROL AND MONITORING PLAN**

This section outlines procedures of the dust control and monitoring plan that will be followed to monitor air quality and ensure compliance with the San Diego Air Pollution Control (APCD) Rule 55 (2009) as well as BMPs to reduce or eliminate dust emissions during construction. APCD Rule 55 applies to any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas.

Due to the nature of the contamination (saturated sediment) and the remedial action to be implemented at the Site, the potential for the release of dust is very low. However, dust management BMPs and control measures have been put in place to ensure workers and the public are protected. This dust control and monitoring plan shall be implemented during sediment staging, loading and unloading, and transport.

### **5.1 Fugitive Dust Best Management Practices and Mitigation Measures**

Some dust may be generated during preparation of the SMA, managing dredged material, stockpiling, and general vehicular traffic. BMPs include the following:

- Water trucks shall spray down all haul routes, travel ways, and active job site soil stockpiles prior to the start of construction each day and then periodically as necessary. Wetting shall be conducted as needed to control dust.
- Stockpile covers shall be placed and anchored during lengthy periods of inactivity, at the end of each work day, just prior to and during periods of precipitation, and to control dust and erosion. Alternative stockpile covers may be considered based on the duration of stockpile inactivity.
- Sediment will be damp prior to loading/unloading activities. Sediment shall also meet Paint Filter Test requirements.
- All trucks hauling sediment shall maintain a minimum of 12 inches of freeboard—lined, as appropriate.
- All trucks shall travel no faster than a maximum speed of 5 mph on site.

- Dirt and dust shall be prevented from escaping from trucks and other vehicles operating or departing the Site by sweeping, covering dusty loads, and power washing truck tires prior to exiting the SMA.
- Any visible track-out into traveled public streets shall be removed within 30 minutes of occurrence.

Observations made during all phases of the dust monitoring program shall be documented by the Construction Management Team in field log notebooks and in electronic files, as applicable.

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## 6 REFERENCES

- Anchor QEA, L.P., 2012. *Remedial Action Plan*. San Diego Shipyard Sediment Site. October 2012.
- Anchor QEA, 2013a. *Basis of Design Memorandum*. San Diego Shipyard Sediment Site – South Shipyard. August 2013.
- Anchor QEA, 2013b. *Dredging Management Plan*. San Diego Shipyard Sediment Site – South Shipyard. August 2013.
- Anchor QEA, 2013c. *Hazardous Materials Transportation Plan*. San Diego Shipyard Sediment Site – South Shipyard. August 2013.
- APCD (County of San Diego Air Pollution Control District), 2009. Rule 55: Fugitive Dust Control. June 24, 2009.
- SWRCB (State Water Resources Control Board), 2009. National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. Order No. 2009-0009-DWQ, NPDES No. CAS000002. Adopted September 2, 2009.
- Water Board (San Diego Regional Water Quality Control Board), 2012a. Cleanup and Abatement Order R9-2012-0024 for the Shipyard Sediment Site. March 14, 2012.
- Water Board, 2012b. *Technical Report for Cleanup and Abatement Order No. R9-2012-0024 for the Shipyard Sediment Site*. March 14, 2012.