City of Alameda

Dredged Material Management Program

Initial Study

January 2014

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City of Alameda
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1.0 PROJECT DESCRIPTION

1.1 BACKGROUND AND ENVIRONMENTAL SETTING

The proposed project will remove accumulated sediments from an internal lagoon system located on Alameda Island in the City of Alameda, California. The lagoons are a result of a development project in the 1950s to create land for new residential development to take advantage in the suburbanization taking place in many parts of the U.S. Addressing a post-World War II population decrease, city planners viewed the development of the south shore of Alameda Island as a way to revitalize the city and attract new residents and businesses. Eventually, more than 4,000 housing units and approximately 550,000 square feet of commercial and retail space was constructed. Approximately 350 acres of landfill was added to the tidal flats, creating a residential community and associated services and facilities, including a shopping center, post office, two schools, and several neighborhood parks.

An identifying feature of this community is an internal lagoon system to be used for aesthetic and recreation purposes, primarily for the residents whose properties are located along the lagoons. This residential frontage is located mostly at rear-yard locations, and includes lagoon frontage, docks, patio decks, and associated waterfront amenities. Recreational craft include kayaks, paddleboats, canoes, and additional non-motorized craft. Motorized water craft are not allowed, except for maintenance purposes.

The lagoons are comprised of salt water pumped from San Francisco Bay through a pumping system linking the lagoons through a series of culverts and are partially drained on an annual basis for approximately 1 month for maintenance and water quality reasons. There is no direct surface access between the lagoons and the bay, nor is there surface access between the lagoons, except between Lagoons 1 and 2 under the Grand Street Bridge. The average lagoon depth is approximately 3 feet, and the maximum depth is approximately 6 feet. There is no direct public access to the lagoons since they were created primarily for private, residential recreation access. Public viewing access is available at mid-block locations along Broadway, Willow Street, Otis Drive, and several other locations.

The lagoons provide an internal network for wildlife viewing, small non-motorized water craft recreation, swimming, and aesthetic purposes. The lagoons, and associated banks and adjacent residential vegetation, also serve as habitat for various species of wildlife, including nesting and migratory birds and small estuarine fish. Local domestic and feral wildlife also utilize the lagoon environment. The lagoon banks are planted with native and non-native species typical of residential rear-yard environments and include trees and large shrubs that are capable of shedding leaves and needles into the lagoon environment.

The lagoons are supplied with bay water via an intake pipe and pump into Lagoon 1. The water then moves by gravity through the five lagoons. There is a weir at Willow Street, between Lagoons 2 and 3, and a weir at Bayview Drive, at the end of Lagoon 5, that regulates the water level. The lagoon system serves as a storm water detention and settling basin. Approximately

1,000 acres (1.6 square miles) of the city drains into the lagoons via overland drainage and storm drain pipes. The lagoons are lowered slightly before each major storm so that the stormwater can be detained and settled before it proceeds through the Bayview weir, through storm drain pipes, and out to the bay.

There are five lagoons, situated as follows (refer to Figures 1 through 3)

- Lagoon 1 – Westline to Grand Street
- Lagoon 2 – Grand St. to Willow Street
- Lagoon 3 – Willow St. to Park Street
- Lagoon 4 – Park St. to Broadway
- Lagoon 5 – Broadway to Court Street

The lagoon waters are owned by the Alameda West Lagoon Home Owners Association (AWLHOA), and maintenance responsibilities are shared with the City of Alameda Public Works Department.

1.2 PURPOSE AND NEED

The primary objective of the project is to remove accumulated sediments from the lagoon system which has been causing the depth of surface water to decrease over the past few decades, potentially affecting the lagoon's water quality, wildlife habitats, and ability to function as a stormwater detention facility. The lagoon system is a component of a residential community and does not have a natural outflow. The lagoon system functions as a stormwater detention facility, allowing detention of stormwaters and settlement of solids. Sediments also enter the lagoon system from the intake pipe. The slow pace of the flow through the lagoons, and outflow over regulated weirs, encourages deposition of sediments and eliminates the opportunity of scouring. As a result, accumulating sediment and debris require removal through excavation and dredging.

The AWLHOA and the City of Alameda Public Works department have been working together to address the accumulation of sediment and water quality degradation in the internal lagoon system. The depths of surface water in the lagoons have been decreasing over the past few decades as more sediment accumulates. The City has conducted bathymetry surveys to map the bottom of the lagoons to define priority areas for sediment removal. The City has conducted sediment sampling for potential contaminants to determine where the dredge spoils could be disposed.

The City is now working with the Dredged Material Management Office (DMMO) to obtain the necessary approvals from state and federal agencies charged with ensuring water quality to begin dredging activities. Removal of these dredged materials and sediments will result in a positive impact to the water quality of the lagoons, as well as their habitat suitability for various wildlife species, and the capacity of the lagoons to treat future stormwater events.

1.3 THE DREDGED MATERIAL MANAGEMENT OFFICE PROGRAM

The DMMO is a joint program of the San Francisco Bay Conservation and Development Commission (BCDC), San Francisco Bay Regional Water Quality Control Board (RWQCB), State Lands Commission (SLC), the San Francisco District U.S. Army Corps of Engineers (USACE), and the U.S. Environmental Protection Agency (EPA). Also participating are the California Department of Fish and Wildlife, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service, which provide advice and expertise to the DMMO process. The purpose of the DMMO is to cooperatively review sediment quality sampling plans, analyze the results of sediment quality sampling, and make suitability determinations for material proposed for disposal in San Francisco Bay. The goal of this interagency group is to increase efficiency and coordination between the member agencies and to foster a comprehensive and consolidated approach to handling dredged material management issues.

1.4 DREDGING AND EXCAVATION ACTIVITIES

The project will include dredging, excavation, hauling, and disposal activities. An estimated total of 12,000 cubic yards of dredged materials will be removed from approximately 28 priority areas within the five lagoons. These priority areas have been determined based on bathymetry surveys that mapped the bottom of the lagoons to locate areas where sediment removal was deemed critical. The dredging contract will be put out to bid with a base bid of the highest priority areas among these 28 areas, and additive alternates of the remaining priority areas, that will be included depending on what can be accomplished within the budgeted funds.

Dredging and excavation activities will be performed via mechanical/excavator dredge with placement of the material into barge mounted scows for dewatering. Dredging would include a compressor, crane, generator set, pump, and one additional piece of heavy equipment. During dredging, surface water will be removed along with sediment. The dredged material will be dewatered before removal so that temporary draw down of surface water would be limited to small quantities removed with the dredged sediment.

The majority of dewatering activities associated with the project will occur as the dredged material is brought from the bottom of the lagoons during removal. Dewatering activities are not expected to generate water requiring containment or disposal on land. Excess water brought up with the dredged material will be allowed to drain back into the lagoon at the priority area where the dredging occurred, before being loaded on the barge. If a silt screen is required to contain Total Suspended Solids (TSS) concentrations above background levels, dewatering of the dredged material would occur within that area.

Based on the sediment sample results it was determined that the sediment was not appropriate for disposal in the San Francisco Bay. Therefore, once dewatered, the barge will be brought near shore and a land based excavator will remove the material and place into trucks to be hauled to a disposal site at Alameda Point.

The dredging activities will primarily occur in one or two lagoons at a time, with one set of dredging equipment and one staging area in operation for each lagoon. The barge will move throughout the lagoon and dredge for materials, then when dredging is completed for that lagoon, the equipment will be moved to the next lagoon, along with relocation to a new staging area, if warranted. It is anticipated that the total time for dredging activities will not exceed more than 3-4 weeks for each lagoon. Since the lagoons are of different size and dimension the time allotted to each lagoon is expected to vary, with dredging activities in Lagoon 1 occurring over a longer period than those for smaller lagoons, such as Lagoons 4 and 5. The City will establish access points for each lagoon and the road section may be closed off briefly for the launch of equipment. During excavation and hauling, at least one lane in each direction will remain open.

The project would entail segregation of the lagoon where the sediment removal is taking place by installation of floating silt curtains, if necessary. The solids would be those which were placed into suspension by the excavation operation. These solids would settle readily without polymer; however, polymer could be used if settling does not occur quickly. A recirculation pump and polymer dosing system may be installed to pump the water with suspended solids from within the segregated lagoon and a small amount of polymer would be added to settle the solids in the segregated lagoon. A polymer that passes aquatic toxicity tests would be used and typically these types of polymers/flocculants are the same products as those used in treatment of water to produce potable water. The polymer dosage would be limited by the results of the aquatic toxicity testing. The flocculated solids would consist of flocculated fine grained sediments which would settle to the bottom of the lagoon, consolidate and remain in place. Since the project goals are based on achieving a certain elevation, these consolidated fine sediments would be required to fall within the design elevation final grade. If necessary, the flocced solids would be pumped through a small geotextile filter bag to capture the majority of the solids prior to sending the filtrate back to the segregated lagoon.

1.5 HAUL ROUTES AND DISPOSAL

Hauling and staging operations would require use of Alameda surface streets, primarily within residential areas. During the approximately 3 month dredging period, approximately 12,000 cubic yards of dredged materials will be transported by truck from the various staging areas to the disposal site at Alameda Point, Installation Restoration (IR) Site 1. The hauling trucks proposed will carry an average of 16 cubic yards per load; this is the maximum legal capacity using California tandem trucks. Therefore, for 12,000 cubic yards, up to 800 total truckloads would be required, resulting in approximately 1,600 total truck trips to and from the haul disposal site. This will result in an average of approximately 22-25 truck trips per day.

Trucks will deliver the material to the disposal site at Alameda Point by way of an established truck haul route. This truck route has been reviewed and approved by the city's Public Works and Police Departments and has been used for various other projects in addition to the current project. The location of the route is intended to mitigate impacts to residential uses by making use of major thoroughfares in Alameda that already support higher volumes of truck, bus, and other vehicular

traffic. Trucks hauling the dredged materials to the disposal site will occur within business hours, and will be limited during school and business rush hours between 7:00 AM to 9:00 AM and after 3:00 PM to limit potential conflicts with school and business traffic.

Since the project will be staged at multiple locations along the lagoons, project access to the truck route will be required to access residential streets leading to and adjacent to the truck route. The nearest truck route to the project is Encinal Avenue, State Route 61. From there, the trucks would travel on Central Avenue (also part of State Route 61, until Webster Street). Central Ave becomes Main Street, which runs all the way to the north entrance of Alameda Point at Navy Way. Since no established truck routes are located on Alameda Point, the trucks would enter via West Atlantic Avenue instead of Navy Way. The other routes into Alameda Point are not recommended as they might be difficult for large trucks (Pacific Avenue and Oriskany Avenue), or go through high pedestrian residential areas (Midway Avenue).

The disposal site for dredged and excavated materials is at Alameda Point IR Site 1, located on the far northeasterly portion, within the unused former runway complex. This site is also used for other disposal activities and is more than 1 mile from the nearest residential uses.

1.6 STAGING AREAS

The project will require multiple staging areas for truck loading and dredge launching since the crane and barge system will traverse the lagoons at various timelines throughout the project schedule. The lagoons are connected by culverts, except for the connection between Lagoons 1 and 2, so they would each would be staged separately. The exact locations of staging areas will be selected based on their proximity to the lagoon, as well as adjacent streets and bridges providing access to the truck route for disposal. Physical features, such as low power lines on many of the adjoining streets, will be a factor as well for identifying the precise locations for truck loading and dredge launching.

Staging area use will correspond to the location of the activities that are being undertaken; however, it is possible that more than one staging area will be used, depending on the level and location of project dredging activities.

Activities within the staging areas would include:

- Construction mobilization (set up fencing and project materials storage)
- Installation of temporary signage to denote location of the staging area, per approval with City public works and emergency services providers to ensure visibility
- Temporary parking for haul trucks and other project-related vehicles
- Removing equipment and returning the site to pre-project conditions after project activities are completed.

The project will use staging areas at various locations providing the most direct access to the lagoons for dredging:

(1) Lagoon 1: Accessed via the west side of the Grand Street Bridge. Another option is the end of Bay Street.

(2) Lagoon 2: Accessed under the Grand Street Bridge to the west side of the bridge for unloading, depending on the size of barge. Alternative access could also be obtained via the ends of Lafayette Street and Union Street.

(3) Lagoon 3: Accessed via Powell Street, with an alternative option at Cedar Street, a dead end with access limited by a large palm tree.

(4) Lagoon 4: Accessed via Broadway.

(5) Lagoon 5: Accessed via Broadway, with options to use Waterton Street to Otis Drive.

The staging areas are in preliminary design and could be adjusted based on field conditions at the time of project construction in coordination with local emergency response agencies.

1.7 PROJECT SCHEDULE

The project will be performed on a timetable commencing in June 2014, with estimated completion in August 2014. Project activities will include staging, dredging, excavation, and hauling. The majority if not all of the dredging will be accomplished during the time that the lagoons are at normal water level. The annual one month period for lagoon draining can be adjusted to work around the schedule of the contractor. Project activities will occur on a weekly basis, with project hours within 7:00 a.m. and 3:00 p.m., Monday through Friday. No evening or holiday hours are anticipated. Project hours would be extended, if needed, subject to public hearing and approval by the Alameda City Manager.

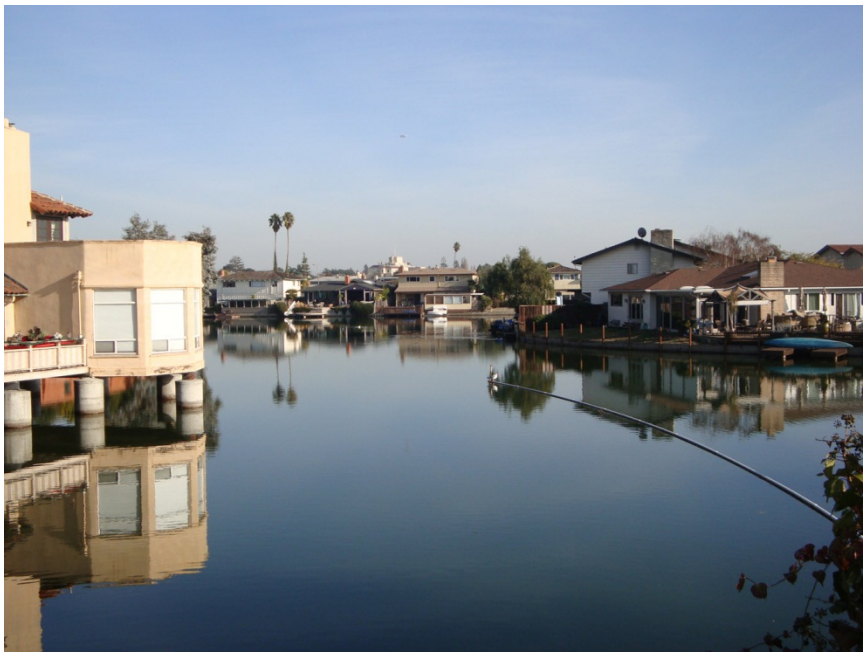
Noise-generating activities will only occur Monday to Friday between 7:00 a.m. and 3:00 p.m. No noise-generating activities are anticipated during evenings, weekends, or holidays. Section 4-10.7 of the Alameda Noise Ordinance states that construction that occurs during these hours is exempt from the noise limits in Table 3. Therefore, project activities will conform to the specifications of the noise ordinance.

The City of Alameda will specify the following provisions that would minimize noise into its agreement with contractors.

- The contractor shall keep construction activities under surveillance and control to minimize damage to the environment by noise. The contractor shall use methods and devices to control noise emitted by equipment.
- All equipment shall have sound control devices no less effective than the original equipment and all motorized equipment shall have muffled exhaust.
- Noise generating construction equipment shall be shielded from occupied residences by noise-attenuating buffers.

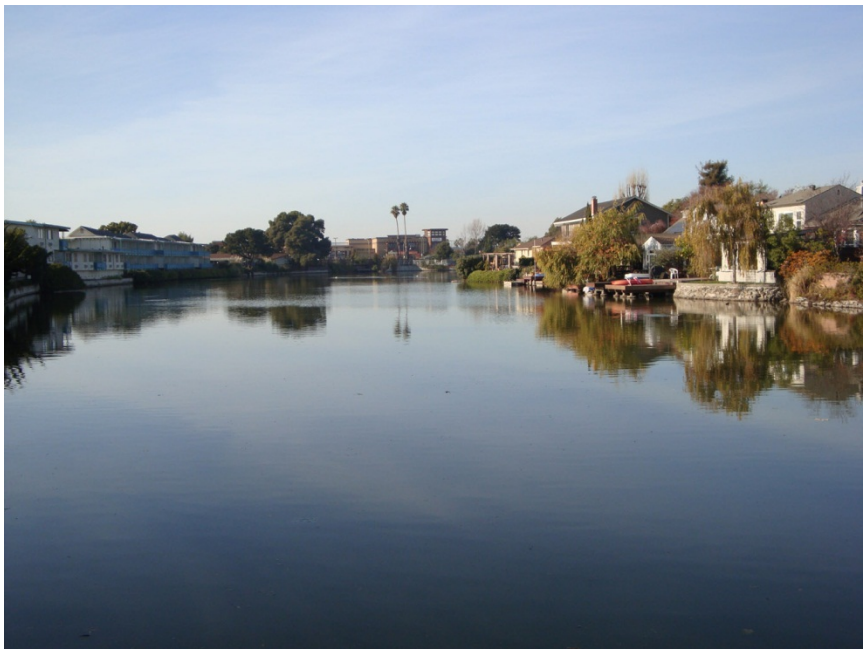
- The contractor shall not use any machine, mechanism, device or contrivance at the Alameda Lagoons that produces a noise level exceeding 85 dBA, measured 50 feet from the source and when measured at a point of reception within the adjacent housing at the Alameda Lagoons does not exceed 55 dBA during the daytime. The "burst" noise level within the housing area shall not exceed 70 dBA.
- Construction activities shall be allowed Monday-Friday from 7:00 a.m. to 3:00 p.m.
- Construction activities and equipment operations within 300 feet of occupied residences shall only be performed from 8:00 a.m. to 3:00 p.m. on Monday through Saturday.
- No operation of equipment requiring backup alarms shall occur outside of 7:00 a.m. to 3:00 p.m.
- No work will occur on the following legal holidays: New Year's Day, Martin Luther King Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving (Thursday and Friday), and Christmas.

Photograph 1. View of Lagoon 1 looking north.



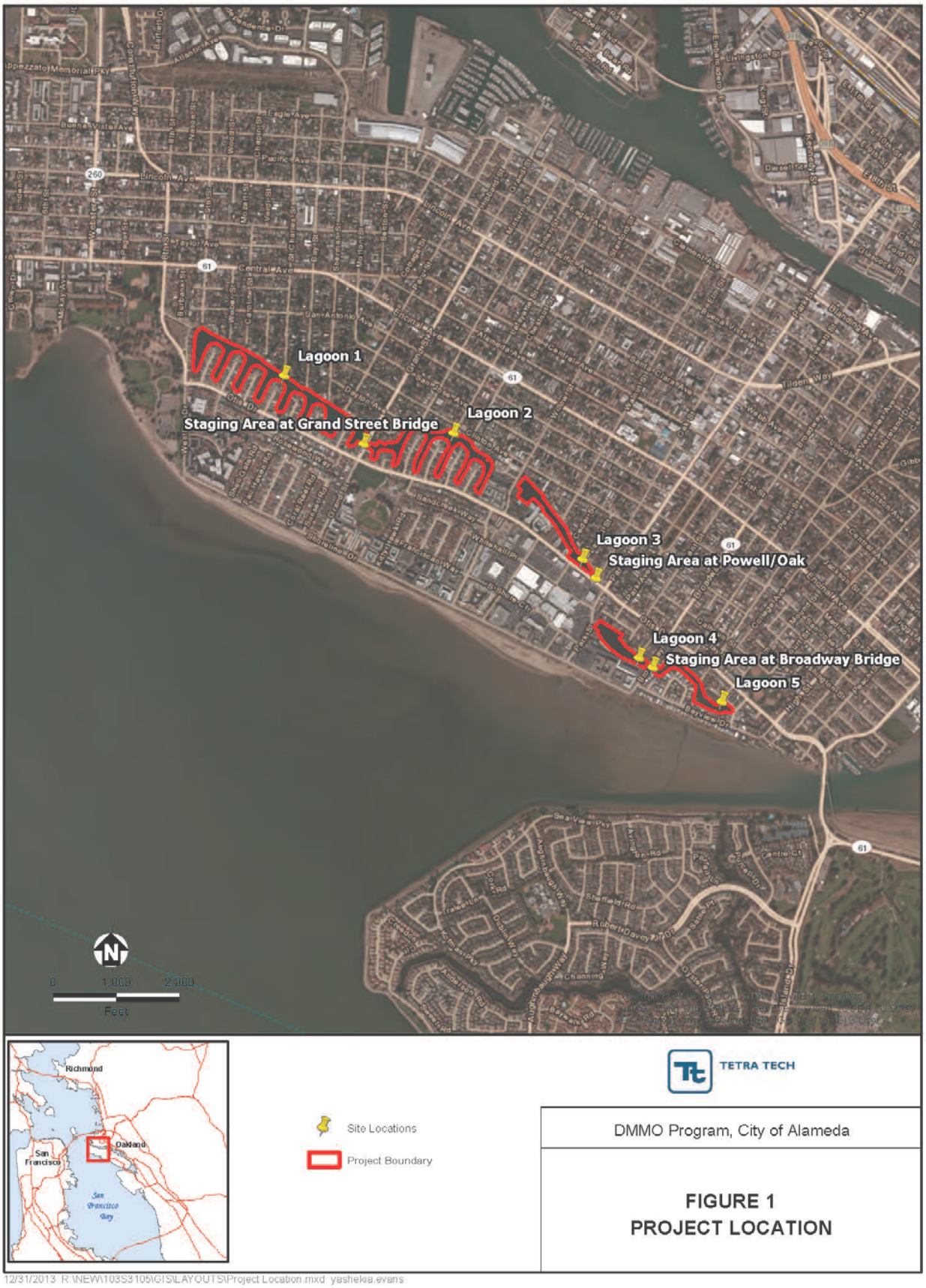
Photograph 2. View of Lagoon 2 looking south.

Photograph 3. View of Lagoon 3 looking north.



Photograph 4. View of Lagoon 4 looking north.

Photograph 5. View of Lagoon 5 looking south.


Lagoon 1
Staging Area at Grand Street Bridge
Lagoon 2
Lagoon 3
Staging Area at Powell/Oak
Lagoon 4
Staging Area at Broadway Bridge
Lagoon 5
N
0
1,000
2,000
Feet
Richmond
San Francisco
Oakland
San Francisco Bay
Site Locations
Project Boundary
TETRA TECH
DMMO Program, City of Alameda
FIGURE 1
PROJECT LOCATION
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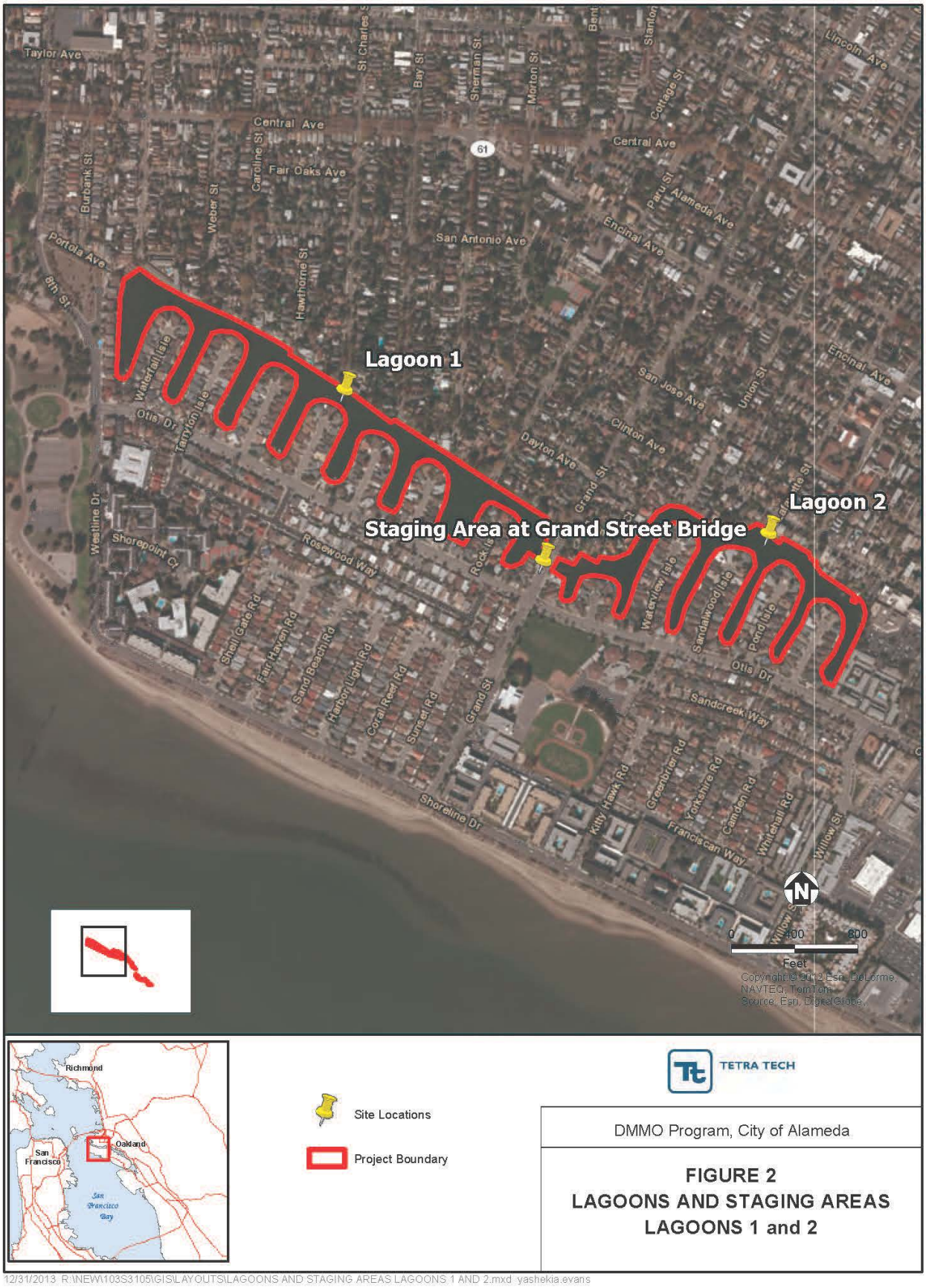
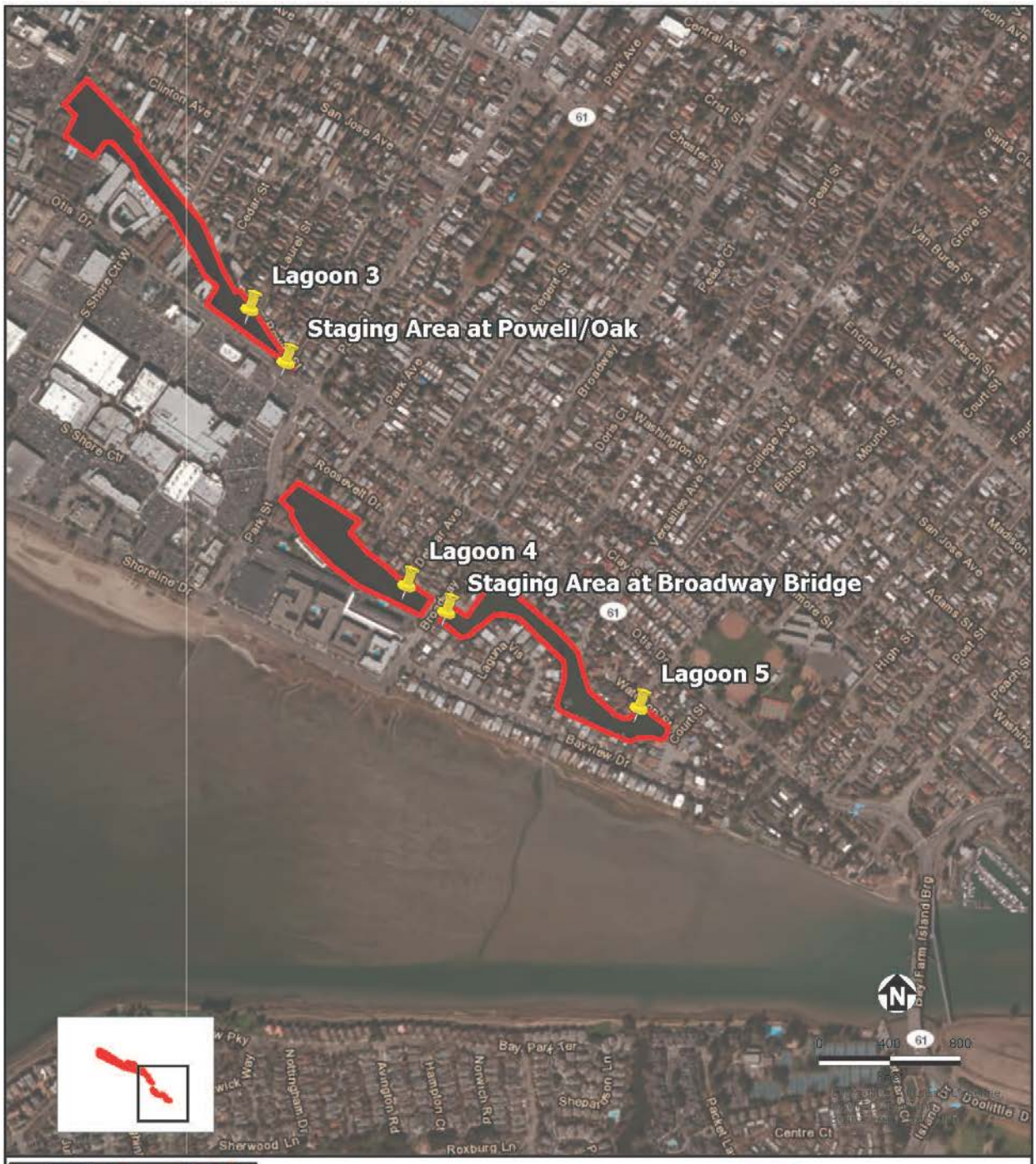

Lagoon 1
Lagoon 2
Staging Area at Grand Street Bridge
Taylor Ave
Central Ave
Fair Oaks Ave
San Antonio Ave
Encinal Ave
Alameda Ave
Portola Ave
8th St
Otis Dr
Clinton Ave
Dayton Ave
San Jose Ave
Grand St
Shoreline Dr
Sandcreek Way
Franciscan Way
Lincoln Ave
Willow St
Rosewood Way
Shorepoint Ct
Westline Dr
Waterfall Isle
Fairylon Isle
Watersview Isle
Sandalwood Isle
Pond Isle
Shell Gate Rd
Fair Haven Rd
Sand Beach Rd
Harbor Light Rd
Coral Reef Rd
Sunset Rd
Kitty Hawk Rd
Greenbrier Rd
Yorkshire Rd
Camden Rd
Whitehall Rd
Burbank St
Caroline St
Weber St
Hawthorne St
St Charles St
Bay St
Sherman St
Morton St
Cottage St
Stanton St
Paru St
Union St
61
N
0
400
800
Feet
Copyright © 2012 Esri, DeLorme, NAVTEQ, TomTom
Source: Esri, DigitalGlobe
Richmond
Oakland
San Francisco
San Francisco Bay
Site Locations
Project Boundary
TETRA TECH
DMMO Program, City of Alameda
FIGURE 2
LAGOONS AND STAGING AREAS
LAGOONS 1 and 2
12/31/2013 R:\NEW\103S3105\GIS\LAYOUTS\LAGOONS AND STAGING AREAS LAGOONS 1 AND 2.mxd yashekia.evans


Lagoon 3
Staging Area at Powell/Oak
Lagoon 4
Staging Area at Broadway Bridge
Lagoon 5
Clinton Ave
San Jose Ave
Park Ave
Central Ave
Otis Dr
S Shore Ctr W
S Shore Ctr
Broadway
Shoreline Dr
Bayview Dr
Sherwood Ln
Roxburg Ln
Centre Ct
Bay Park Ter
Norwich Rd
Hampton Ct
Avington Rd
Nottingham Dr
Dbl Farm Island Brg
0
400
800
Richmond
Oakland
San Francisco
San Francisco Bay
Site Locations
Project Boundary
TETRA TECH
DMMO Program, City of Alameda
FIGURE 3
LAGOONS AND STAGING AREAS
LAGOONS 3, 4 and 5
12/31/2013 R:\NEW\103S3105\GIS\LAYOUTS\LAGOONS AND STAGING AREAS LAGOONS 3,4 and 5.mxd yashokia.evans

2.0 ADJACENT AND NEARBY LAND USES

The lagoons occur within a mostly residential environment. Single-family residential uses are located adjacent Lagoons 1 and 2, with the exception of multi-family uses at the northern portion of Lagoon 1 and the southern portion of Lagoon 2. Single-family residential uses are located on the east side of Lagoon 3, while multi-family residential uses are located on its western side. This general land use pattern is repeated in Lagoons 4 and 5. In addition to residential uses, scattered, non-residential uses are found at various locations adjacent to and in the vicinity of the lagoon system. The most prominent non-residential use is Alameda Hospital, located between Lagoons 2 and 3. A tourist hotel is located along a portion of Lagoon 4, adjacent to Park Street.

Nearby uses include residential uses, as well as several parks, including Krusi Park, Washington Park, Rittler Park, the Romer Bird Sanctuary, and the Robert W. Crown Memorial State Beach. Nearby schools include Donald D. Lum Elementary School, Wood Middle School, Otis Elementary School, and St. Joseph Notre Dame High School. The South Shore Center between Lagoons 3 and 4 provides shopping and services, as well as a post office.

3.0 PERMITS AND APPROVALS REQUIRED

3.1 U.S. ARMY CORPS OF ENGINEERS

Permit authorization to work within the navigable waters of the United States, and under Section 404 (Clean Water Act) for fill materials within the waters of the United States.

3.2 SAN FRANCISCO REGIONAL WATER QUALITY CONTROL BOARD

Permit authorization for actions that could affect the waters within RWQCB's jurisdiction and for discharge of water under Section 401 of the Clean Water Act. The Section 401 certification will also be required as part of the USACE's permitting process.

3.3 CITY OF ALAMEDA

Combination building permit from the Building Department for work within the city's right-of-way and for excavation activities. Other city agencies may review environmental documents as required.

4.0 MITIGATION MEASURES

The following Mitigation Measures will be incorporated into the program to reduce any potential impacts to a less-than significant level.

4.1 MITIGATION MEASURE AIR-1: (BAY AREA AIR QUALITY MANAGEMENT DISTRICT) BAAQMD CONSTRUCTION MITIGATION MEASURES

- All exposed surfaces (parking areas, staging areas) shall be watered and/or swept clean two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer‘s specifications. All equipment shall be checked by a certified visible emissions evaluator.
- A publicly visible sign would be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD’s phone number shall also be visible to ensure compliance with applicable regulations.

4.2 MITIGATION MEASURE BIO-1: PROTECTION FOR NESTING BIRDS

If nesting birds are encountered during project activities, work shall be halted until the birds have fledged or a disturbance-free buffer has been established. Buffer sizes will be established in consultation with Tetra Tech and the California Department of Fish and Wildlife and/or United States Fish and Wildlife Service. If for any reason a bird nest must be removed during the nesting season, the project proponent shall provide written documentation providing concurrence from the appropriate resource agencies (e.g., California Department of Fish and Wildlife and United States Fish and Wildlife Service) authorizing the nest relocation.

4.3 MITIGATION MEASURE CUL-1: CULTURAL RESOURCES RECORD SEARCH

Prior to commencement of project activities, a record search will be conducted to confirm that there are no recorded cultural resources in or adjacent to the project area. Pursuant to CEQA Guidelines section 15064.5 (f), “provisions for historical or unique archaeological resources

accidentally discovered during construction" should be instituted. Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during the project, all work within 100 feet of the resources shall be halted and the project applicant and/or lead agency shall consult with a qualified archaeologist to assess the significance of the find. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified archaeologist would meet to determine the appropriate avoidance measures or other appropriate measure. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.

In considering any suggested measure proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the project applicant shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while measure for historical resources or unique archaeological resources is carried out.

4.4 MITIGATION CUL-2: ACCIDENTAL DISCOVERY OF HUMAN REMAINS

In the event that human skeletal remains are discovered as part of the project, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and following the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 100-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously and determine whether there are areas that may be sensitive.

4.5 MITIGATION MEASURE HAZ-1: SITE HEALTH AND SAFETY PLAN

A site Health and Safety Plan (HASP) shall be prepared by the project contractor in accordance with federal and state OSHA requirements, and appropriate personal protective equipment shall be used and waste management procedures implemented based on the plan. The HASP will include procedures required to handle and mitigate potential risk from direct contact due to contaminated soil during excavation. This plan will describe training requirements and certifications needed for personnel who would be involved with the removal of lead-contaminated material. Adherence to this plan will reduce the potential hazard posed by contaminated sediment to the public and environment to less than significant.

4.6 MITIGATION MEASURE HAZ-2: MANAGEMENT OF SOIL

The project sponsor shall obtain representative samples of dredged material to confirm the appropriate disposal methods. All sediment encountered during project activities shall be assumed to contain elevated levels of contaminants and shall be managed appropriately until laboratory testing confirms suitability. Access to the support and work areas will be controlled by fences, and signage to prevent entry by unauthorized personnel and vehicles. Dust generation is not a major concern because the sediment will be placed on trucks to be transported off site as the moisture evaporates. Sediment will be covered during transport to the Alameda Point IR Site 1 landfill.

4.7 MITIGATION MEASURE HW-1: BEST MANAGEMENT PRACTICES (BMPS) AND EROSION CONTROL MEASURES

Erosion control measures and BMPs shall be implemented to minimize the effects of erosion, sedimentation, and leakage of vehicle and equipment fluids and shall be developed further in the project-specific SWPPP prepared by the contractor, in accordance with the requirements of the General Construction Permit. The BMPs described in the SWPPP shall require review and approval by the RWQCB. BMPs implemented as part of the proposed project could include the measures described below. The measures could be altered, supplemented, or deleted during the RWQCB review process. Implementation of these measures shall help meet the relevant water quality objectives included in the Basin Plan (for example, maintain beneficial uses of receiving waters, not create floating material or visible film at the water surface, and prevent toxic substances in concentrations that would adversely affect aquatic life in receiving waters) (SWRCB 2011).

4.8 MITIGATION MEASURE HW-2: MANAGEMENT OF DEWATERING DISCHARGES

The contractor shall prepare a project-specific dewatering plan to address potential impacts of dewatering discharges during construction on the water quality of receiving water bodies and to comply with the NPDES requirements. The discharges shall be handled in accordance with the General Construction Permit.

A management plan for dewatering shall be prepared to comply with the NPDES requirements. The discharges shall be handled in accordance with the General Construction Permit and shall be developed and approved before dredging. The dewatering management plan shall specify methods for collecting, transporting, treating, and discharging all water produced by construction site dewatering. Applicable BMPs shall be identified in the dewatering management plan to ensure that discharges to receiving waters meet applicable water quality objectives.

4.9 MITIGATION MEASURE HW-3: MANAGEMENT OF SILTATION FROM DREDGING ACTIVITIES

The dredging associated with the project has the potential to cause an increase of suspended solids in the lagoons if suspended solids are not properly managed during dredging of the priority areas. The project contractor shall segregate the priority areas by installing silt curtains during dredging if the TSS concentrations during dredging exceed background concentrations established before dredging. The silt curtain will help prevent suspended solids from increasing TSS concentrations in areas of the lagoon no being dredged. If the solids do not settle, a small polymer system on a barge will use a small amount of polymer re-circulate to aid the settling of suspended solids.

4.10 MITIGATION MEASURE TRA-1: CONSTRUCTION TRAFFIC CONTROL PLAN.

The project contractor shall prepare and implement a construction traffic control plan that will include project-specific measures to reduce potential impacts on traffic flows on roadways affected by project construction. This plan will be reviewed and approved by the City of Alameda prior to commencement of project activities. These roadways will include, but not be limited to Willow Street, Grand Street, and Broadway. The plan shall include the following:

- Flaggers or signs will guide vehicle and other traffic (pedestrian and bicycles) through or around the construction zone. At all times, the contractor will maintain access for emergency response vehicles.
- Large truck and delivery trips shall be scheduled outside the peak morning and evening commute hours, and outside on-site peak traffic hours (for parking lot use).
- Along major arterials, truck trips will be scheduled outside the peak morning, peak evening, and event commute periods to the extent feasible.
- Construction, particularly related to potential lane closures, will be coordinated with local transit service providers.
- On-going and up-to-date information relating to the construction schedule and affected roadways and intersections, particularly lane closures, and a contact person, shall be provided to the public, for example on the City of Alameda website.
- Where it is feasible and safe to do so, existing pedestrian and bicycle access and circulation will be maintained at all times. If access and circulation cannot be maintained, detours will be designated and posted for pedestrians and bicyclists.
- All construction equipment and materials will be stored in designated contractor staging areas on or adjacent to the worksite, in a manner that minimizes obstruction of traffic.
- Public roadways will be repaired or restored to their original conditions upon completion of construction.
- The traffic control plan will conform to the *California Manual on Uniform Traffic Control Devices: Part 6*, "Temporary Traffic Control." Traffic plans may require approval from City emergency response providers. Traffic circulation patterns and associated signage will be approved by the City.

5.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forest Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural/Paleo Resources	☐	Geology /Soils
☐	Greenhouse Gas Emissions	☒	Hazards & Hazardous Materials	☒	Hydrology / Water Quality
☐	Land Use / Land use Planning	☐	Mineral Resources	☐	Noise
☐	Population / Housing	☐	Public Services	☐	Recreation
☒	Transportation/Circulation	☐	Utilities / Service Systems	☐	Mandatory Findings of Significance

DETERMINATION: (*To be completed by the Lead Agency*) On the basis of this initial evaluation:

☐	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☒	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☐	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ Date _____

Signature _____ Date _____

6.0 EVALUATION OF ENVIRONMENTAL IMPACTS

(1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (for example, the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (for example, the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

(2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

(3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

(4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

(5) Earlier analyses may be used where, pursuant to the tiering, program environmental impact report (EIR), or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

(a) Earlier Analysis Used. Identify and state where they are available for review.

(b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

(c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

(6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (general plans and zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

(7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

(8) This form is only suggested, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

(9) The explanation of each issue should identify:

(a) The significance criteria or threshold, if any, used to evaluate each question; and

(b) The mitigation measure identified, if any, to reduce the impact to less than significance.

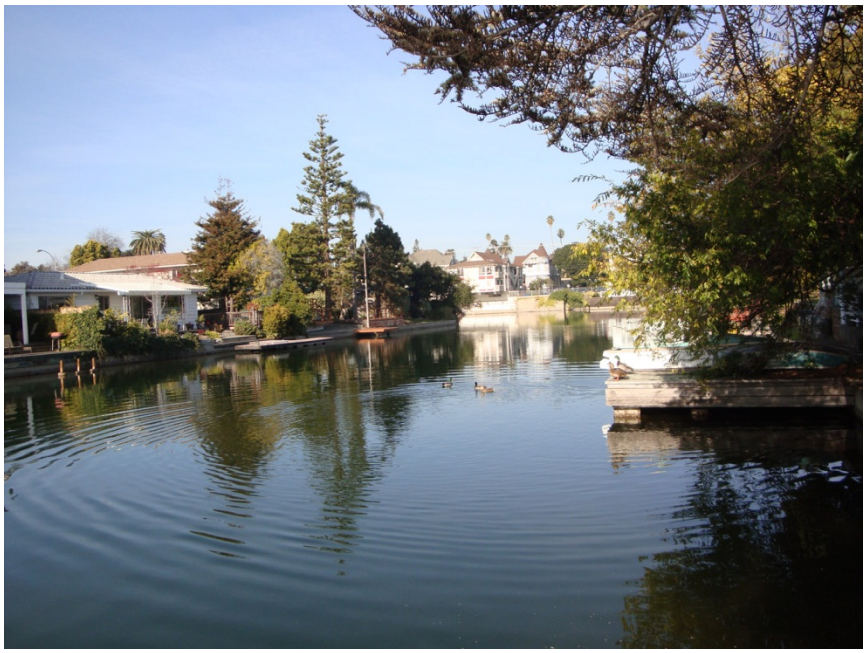
Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS				
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

A visual quality/aesthetic analysis is subjective and considers the project design in relation to the surrounding visual character, heights, and building and structure types, its potential to obstruct scenic views or vistas, and its potential for light and glare. The proposed project's specific design would be considered to have a significant adverse environmental effect on visual quality only if it were to cause a substantial, demonstrable, negative change.

Setting

The project area is located on the south shore of the City of Alameda. The lagoons are a result of a land development project in the 1950s to create land for new residential development to take advantage in the suburbanization taking place in many parts of the U.S. Responding to a post-World War II population decrease, City planners viewed the development of the south shore of Alameda Island as a way to revitalize the City of Alameda and draw new residents to the city. The project required approximately 350 acres of infill to the south shore of Alameda Island, and the lagoons were created as part of this development project. As such, the natural aesthetic landscape of the region was substantially altered. According to the Alameda General Plan, the south shore area includes a mix of classified land uses, including low- and medium-density residential, parks and open space, commercial and public, institutional and school uses.

This development includes more than 4,000 housing units and approximately 550,000 square feet of commercial space.



Photograph 6. Typical lagoon view from single-family residence.

Question I.a: The proposed project would not have a substantial adverse effect on a scenic vista. (Less Than Significant)

The proposed project would result in a temporary adverse effect on the scenic vista during the construction period, between June 2014 and August 2014. Visual impacts would result from the presence of construction equipment associated with the dredging and may include equipment that rises near or above surrounding vegetation and the horizon line. Construction equipment would be visible to residents in the immediate area of dredging. These impacts would be temporary, occurring during the construction period only, and would cease once the dredging ends. Therefore, the proposed project would have a *less than significant* impact on the scenic vista and no long term adverse effects on the scenic vista are expected.

Additionally, the proposed disposal area would be located at Alameda Point in a part of an unused portion of the former naval air station. The disposal area would not be visible to nearby residents based on the distance and isolated location near the tip of Alameda Point. There is the potential for visibility of the disposal area for ferry passengers passing Alameda Point, but would be very limited because of the distance. Therefore, the proposed disposal area would have a *less than significant* impact.

Question I.b: The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (No Impact)

Proposed project activities entail dredging materials and sediments from the city's internal lagoon system that have been built up over time that have potentially affected the lagoon's water quality, stormwater detention, and wildlife habitats. Dredging would be limited to the lagoon floors only and is not located within a state scenic highway, nor will it involve any of the surrounding private properties, including vegetation, rock outcroppings, or buildings. Therefore, the proposed project would have *no impact* on scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

Question I.c: The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. (Less Than Significant)

The proposed project would result in a temporary adverse effect on the existing visual quality during the construction period, between June 2014 and August 2014. Visual impacts would result from the presence of construction equipment associated with dredging. Construction equipment would be visible to residents in the immediate area of dredging. These impacts would be temporary, occurring during the construction period only and would cease once the dredging ends. Therefore, the proposed project would have a *less than significant* impact on the existing visual character or quality of the site and its surroundings and no long term adverse effects would occur.

Question I.d: The proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. (No Impact)

Proposed dredging would occur during the day-time working hours only and would not require installation of lighting equipment. Standard construction equipment would be used in the dredging, which do not produce glare. Therefore, the proposed project would have *no impact* from substantial light or glare on day or nighttime views.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURAL AND FOREST RESOURCES				
Would the project::				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Setting

Based on a review of the City of Alameda General Plan, there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, Agricultural, Forest Land or Timberland land use classifications within City limits.

Question II.a: The proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use. (No Impact)

Based on California Department of Conservation (CDC) maps and statistical data, no portion of the project site is classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on the Alameda County Important Farmland 2010 map (CDC 2010). The project site is a water-filled lagoon, with surrounding lands classified as a variety of land uses including low- and medium-density residential, parks and open space, commercial and public, institutional, and schools. Therefore, the proposed project would not convert farmland to nonagricultural use and *no impact* would occur.

Question II.b: The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. (No Impact)

According to the Alameda General Plan, no lands within city limits are subject to the Williamson Act contract (Alameda 1991). The project sites are lagoons within city limits and the proposed project does not conflict with existing zoning for agricultural use and would not affect agricultural land subject to a Williamson Act contract. Therefore, *no impact* would occur.

Question II.c: The proposed project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). (No Impact)

The City of Alameda identifies the project site as a water-filled lagoon that does not constitute forest land or timberland. Therefore, the proposed project would not conflict with existing zoning, or cause rezoning, of forest land or timberland. *No impact* would occur.

Question II.d: The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. (No Impact)

The project site is not designated as forest land. Therefore, the proposed project would not convert forest land to nonforest use. *No impact* would occur.

Question II.e: The proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. (No Impact)

The project site is not designated as either farmland or forest land. Therefore, the proposed project would not convert farmland to non-agricultural use or forest land to non- forest use. *No impact* would occur.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Setting

The project is in the City and County of Alameda, within the San Francisco Bay Area Air Basin (SFBAAB). The U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the Bay Area Air Quality Management District (BAAQMD) regulate air quality in Alameda. The Clean Air Act (CAA) (42 United States Code [U.S.C.] 7401-7671q), as amended, assigns the EPA responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 Code of Federal Regulations [CFR] Part 50) that specify acceptable concentration levels of six criteria pollutants: particulate matter (measured as both particulate matter less than 10 microns in diameter [PM_{10}] and particulate matter less than 2.5 microns in diameter [$PM_{2.5}$]), sulfur dioxide (SO_2), carbon monoxide (CO), oxides of nitrogen (NO_X), ozone (O_3), and lead. Short-term NAAQS (1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects, while long-term NAAQS (annual averages) have been established for pollutants contributing to chronic health effects. In addition to the NAAQS, the CARB has set California Ambient Air Quality Standards (CAAQS) for certain pollutants, such as particulate matter and ozone, which

are more protective of public health than the federal standards. California has also set standards for some pollutants that are not addressed by federal standards.

Federal and state regulations designate areas with levels above the standards as nonattainment areas, and areas with levels below as attainment areas. The attainment status of Alameda County for both the NAAQS and CAAQS is outlined in Table 1.

TABLE 1 – ATTAINMENT STATUS FOR ALAMEDA COUNTY

Pollutant	Averaging	CAAQS		NAAQS	
		Concentration	**Attainment Status**	**Concentration**	**Attainment Status**
Ozone	8 Hour	0.070 ppm	Nonattainment	0.075 ppm	Nonattainment
	1 Hour	0.09 ppm	Nonattainment		Attainment
Carbon Monoxide	8 Hour	9.0 ppm	Attainment	9 ppm	Attainment
	1 Hour	20 ppm	Attainment	35 ppm	Attainment
Nitrogen Dioxide	1 Hour	0.18 ppm	Attainment	0.100 ppm	Attainment
	Annual Arithmetic Mean	0.030 ppm		0.053 ppm	Attainment
Sulfur Dioxide	24 Hour	0.04 ppm	Attainment	0.14 ppm	Attainment
	1 Hour	0.25 ppm	Attainment	0.075 ppm	Attainment
	Annual Arithmetic Mean			0.030 ppm	Attainment
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	Nonattainment		
	24 Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Attainment
Particulate Matter - Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	Nonattainment	15 µg/m^3	Attainment
	24 Hour			35 µg/m^3	Nonattainment
Hydrogen Sulfide	1 Hour	0.03 ppm			Attainment

Source: BAAQMD 2013

µg/m^3 Micrograms per cubic meter

ppm Parts per million

Question III.a: The proposed project would not conflict with or obstruct implementation of an applicable air quality plan. (Less Than Significant)

The EPA requires states to submit a State Implementation Plan (SIP) providing measures to attain the air standards in a reasonable period. The CARB establishes policies for reducing air emissions and is responsible for preparing the SIP. In 2010, the BAAQMD adopted the *Bay Area 2010 Clean Air Plan* to reduce ozone, particulate matter (PM), air toxics, and greenhouse gas (GHG) emissions to meet the state and federal standards. The *Clean Air Plan* includes:

- Updates to the recent Bay Area 2005 Ozone Strategy in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone;
- A control strategy to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases in a single, integrated plan;
- A review of progress in improving air quality in recent years; and
- Emission control measures to be implemented in the 2010-2012 timeframe.

A project could be inconsistent with the applicable air quality management plan or attainment plan if it caused growth in population, employment, or vehicle-miles traveled in excess of the forecasts in the SIP or the Clean Air Plan. In addition, in 2012, BAAQMD (re)adopted the *CEQA Air Quality Guidelines,* which establish thresholds of significance, and provides procedures for evaluating effects from both criteria air pollutant and GHG emissions, and health risks from new sources of emissions (BAAQMD 2012).

The short-term emissions associated with the project would not conflict with any goals set by the BAAQMD to achieve attainment, including the long-term goals outlined in the SIP or the Clean Air Plan. The project would be consistent with SIP or the Clean Air Plan by complying with all the applicable guidelines and regulations. Dredging crews, support personnel, and truck drivers would commute to the project area for the duration of the project. These employees would be drawn from the existing workforce, and all project-related commuter activities would end with completion of the project.

There would be no additional infrastructure, no new stationary sources of air emission, no periodic maintenance activities, or long-term ongoing sources of air emissions of any kind. The project would not introduce any new land uses or additional traffic trips that would alter the local roadway network, local transit lines, or local bicycle and pedestrian networks. Therefore, the project would not conflict with or obstruct implementation of the applicable air quality plan. These effects would be *less than significant*.

Question III.b: The proposed project would not violate or contribute to the violation of an air quality standard. (Less Than Significant)

The proposed project would include dredging activities and the transport and stockpiling of dredged materials. These activities would include use of heavy equipment and truck and commuter vehicle use. Project emissions were calculated and compared to thresholds specified by the BAAQMD/CEQA guidelines. The CARB-approved Roadway Construction Emissions Model (Roadmod, V 7.1.5) was used to calculate dredging emissions, whereby emissions calculations rely on factors from the CARB EMFAC201. As a reasonable upper bound of effects, it was assumed:

- Dredging would include a compressor, crane, generator set, pump, and one additional piece of heavy equipment;
- There would be 800 truckloads of dredge materials during a 4-month construction period;
- As many as 25 personal vehicle commutes each day; and
- Fugitive dust emissions would be comparable to clearing 1 acre per day.

Unmitigated dredging emissions would be below the significance thresholds specified by the BAAQMD Air Quality Guidelines (Table 2). Detailed emissions calculations are outlined in Appendix A.

TABLE 2 – SUMMARY OF DAILY EMISSIONS

Emissions Component	Dredging Emissions (Pounds per Day)				
	ROG	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**CO_2**
Heavy Equipment Emissions	4.6	41.9	2.5	2.3	3,828.7
Hauling Emissions	0.1	3.0	0.1	0.1	498.2
Worker Commutes	0.5	0.6	0.1	0.0	997.6
Fugitive Dust	0.0	0.0	20.0	4.2	0.0
TOTAL	5.2	45.5	22.7	6.6	5,324.5
BAAQMD Threshold	54	54	82	54	NA
Above Threshold?	No	No	No	No	No

Source: SMAQMD 2013
ROG Reactive organic gases

Activities may include emissions from compounds within the lagoon native material such as hydrogen sulfide, and other naturally occurring reactive organic gases or volatile organic compounds. These materials will not be stored at or near the lagoons and would be transported to the storage location by truck. Since unmitigated dredging emissions would be below the significance thresholds specified by the Air Quality Guidelines is expected that the overall

emissions of these substances would be limited. Any natural emissions associated with dredging material would end with the completion of the project or soon after. These effects would be minor. Odors from the use of substances are addressed in Question III.e below.

There would be no additional infrastructure, no new stationary sources of air emission, no periodic maintenance activities, or long-term ongoing sources of air emissions of any kind. Air emissions would end with completion of the project. The project would not violate or exceed any threshold of significance, in accordance with BAAQMD emissions standards. These effects would be *less than significant*.

Although these effects would be minor, *Mitigation Measure AIR-1: BAAQMD Construction Mitigation Measures* outlined in *BAAQMD Air Quality Guidelines* would be implemented:

Mitigation Measure AIR-1: Bay Area Air Quality Management District (BAAQMD) Construction Mitigation Measures

- All exposed surfaces (parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer‘s specifications. All equipment shall be checked by a certified visible emissions evaluator.
- A publicly visible sign would be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD’s phone number shall also be visible to ensure compliance with applicable regulations.

These measures will reduce the overall emissions outlined in Table 2. The actual overall emissions would be less than those shown in this analysis.

Question III.c: The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard? (No Impact)

Cumulative impacts are the effects of long-term (operational) emissions of a project on the local general plan and the regional air quality plan. The proposed project would have no long-term ongoing sources of air emissions and activities in the region would be similar to those already occurring before the project. Therefore, the project would have *no cumulative impact* on air quality.

Question III.d: The proposed project's emissions would not expose sensitive receptors to substantial pollutant concentrations (Less Than Significant)

Activities involving heavy equipment can generate TACs, in particular diesel particulate matter (DPM), from diesel haul trucks and construction equipment. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of activities involving heavy equipment. As a result, it is difficult to produce accurate estimates of health risk (BAAQMD 2012).

The project would not violate or exceed any threshold of significance, outlined in the BAAQMD/CEQA Guidelines. Dredging, material transport, and associated emissions would not be concentrated in any one location for extended periods of time. Effects caused by heavy equipment would move from one area to another as the project progresses. There are no new stationary sources, no new receptors, no change in roadways, no long-term changes in on-road vehicle traffic. Given the temporary nature of proposed activities and the limited amount of emissions that the project would generate, the project's emissions would not expose sensitive receptors to substantial pollutant concentrations. This impact would be *less than significant*.

Question III.e: The proposed project would not create objectionable odors affecting a substantial number of people. (Less Than Significant)

Although dredging is not specifically listed as a potential source of odor in the BAAQMD/CEQA Guidelines, the proposed project may result in a perceptible increase in odors in the vicinity of the project. Although the lagoons contain water that control odor from the underlying sediment at the point of dredging, removal of the sediments may generate odors during removal and placement of sediment on transport trucks, and as sediment is transported to the proposed site for stockpiling and drying. The sediment would not contain odor-generating contaminants other than naturally occurring organic material.

Although nearby residents would experience some amounts of odor, it is unlikely these odors would affect a substantial number of people. Dredging and material transport and associated odor would not be concentrated in any one location for extended periods of time. Effects caused by odor would move from one area to another as the project progresses.

There would be no permanent or ongoing sources of odor generated from the project. Any odors resulting from dredging would end when the project is complete. Therefore, no long-term effects would be expected. Given the temporary nature of proposed activities and the limited amount of odor that the project would generate, this impact would be *less than significant*.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES				
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Setting

The project site consists of a lagoon system covering approximately 4 miles of Alameda Island. The lagoons are man-made, diked impoundments filled with salt water pumped from

the San Francisco Bay into a system of culverts that link the lagoons. The bottoms of the lagoons are unconsolidated with at least 25 percent cover of particles smaller than stones (less than 6 to 7 centimeters) and a vegetative cover less than 30 percent (Wetland Classification Codes, USFWS 2013a). Residential communities and associated services and facilities surround the lagoons. Vegetation found on the banks includes a mixture of native and non-native species typical of residential rear-yard environments. The lagoons and associated banks provide habitat for various wildlife, particularly migratory birds.

The following biological resources analysis assessed the project site for its potential to support sensitive biological resources and determine whether project activities may adversely affect these resources. The California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), the California Native Plant Society's (CNPS) Rare and Endangered Plant Inventory, and the U.S. Fish and Wildlife Service's (USFWS) Critical Habitat Portal and National Wetlands Mapper were queried for any recorded observations of special-status species and sensitive habitat within the vicinity of the project site. In addition, the City of Alameda General Plan and applicable state and federal environmental laws were reviewed.

Question IV.a: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (No Impact)

The CNDDB query was narrowed to species reported within a half-mile radius of the project site. The query generated two occurrences for the California clapper rail (*Rallus longirostris obsoletus*) along the coast line, approximately 0.4 mile from the project site. California clapper rails occur almost exclusively in tidal salt and brackish marshes (CA Clapper Rail, USFWS 2013b). A search of the CNPS Rare and Endangered Plant Inventory for U.S. Geological Survey USGS 7.5-minute quadrangles Oakland West and Oakland East listed three special-status plant species as having the potential to occur near the project site: pallid manzanita (*Arctostaphylos pallida*), Presidio clarkia (*Clarkia franciscana*), and Santa Cruz tarplant (*Holocarpha macradenia*) (CNPS 2010). These plant species are typically associated with forest, chaparral, coastal scrub, and valley and foothill grassland.

No special-status plant or animal species is likely to occur within the project area. In general, the highly modified habitat of the project site does not support habitat suitable for the special-status species listed in the database queries. In addition, there were no results for critical habitat for threatened and endangered species from the USFWS Critical Habitat Portal query. Further, discharge of sediments from the lagoon to the San Francisco Bay outfall pipe will be prevented by implementing *Mitigation Measures HW-1, HW-2*, and *HW-3* to maintain water quality during dredging activities. Therefore, impacts to fish populations and eel grass communities within the Bay will be less than significant. Given these conditions, it is anticipated the proposed project would have *no impact* on the population or range of any special-status species.

Question IV.b: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (No Impact)

The CNDDB and USFWS Critical Habitat Portal and National Wetlands Mapper do not list any sensitive natural communities within the project site. Therefore, project activities will have *no impact* on riparian habitat or other sensitive natural communities.

Question IV.c: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (Less Than Significant)

The system of lagoons is considered federally protected Waters of the U.S. pursuant to Section 404 of the Clean Water Act and will be temporarily affected by project activities. However, project activities will be permitted under a USACE nationwide permit. Nationwide permits are regulated and issued by the USACE to authorize activities with minor impacts to aquatic environments. Normally, nationwide permits outline regulations and mitigation measures that the proponent is required to follow to perform project activities. The nationwide permit will also require Section 401 certification under the jurisdiction of the San Francisco Regional Water Quality Control Board for discharge into Waters of the U.S. Implementation of the requirements outlined in the USACE nationwide permit and Section 401 certification will mitigate substantial adverse effects on the lagoons, resulting in *less than significant* impacts to these Waters of the U.S.

Question IV.d: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (Less Than Significant with Mitigation)

Wildlife movement includes physical connections, such as habitat corridors, linkages, crossings, and travel routes, which allow wildlife to move between patches of suitable habitat in undisturbed landscapes as well as environments fragmented by urban development. The lagoons are connected through culverts, but there is no surface access between the lagoons or between the lagoons and the San Francisco Bay. The area where sediment removal is taking place in each lagoon will be segregated from the rest of the lagoon through installation of floating silt curtains, if necessary. These curtains will eliminate any suspended solids from migrating and obstructing the pumping system that brings water in from the bay or the system of culverts that links the lagoons. The lagoons are separated from suitable habitats by residential development, arterial roadways, and barriers such as walls and fences.

The lagoon system is frequented by resident and migratory birds including egrets, cranes, night herons, blue herons, terns, coots, cormorants, many varieties of ducks, and geese. The City of Alameda receives annual reports regarding nesting raptors adjacent to the lagoons. None of the nine (9) nesting sites identified in the 2012 annual report currently occur near planned staging areas for the project. Project activities are scheduled to occur during breeding season (February 1 through August 31). Migratory bird species may occasionally use the site for foraging but, because of the exposed nature of the site, existing land uses, and lack of plant species preferred foraging, migratory birds are unlikely to use the project sites for refuge habitat or to spend

much time there. In addition, it is improbable that project activities would disturb trees, shrubs, and herbaceous vegetation with the potential to support nesting birds since staging areas will occur along existing roads and roadways, and dredging will be performed via mechanical/excavator dredge located on a barge placed in each lagoon.

Project activities do not include trimming, pruning, or removing any existing vegetation. Noise or vibration from dredging will be temporary and not likely to cause birds to abandon their nests. However, to ensure project activities would not substantially interfere with the movement of nesting birds, *Mitigation Measure BIO-1: Protection for Nesting Birds,* will be implemented to avoid or reduce potentially significant impacts to *less than significant*.

Mitigation Measure BIO-1: Protection for Nesting Birds

If nesting birds are encountered during project activities, work shall be halted until the birds have fledged or a disturbance-free buffer has been established. Buffer sizes will be established in consultation with Tetra Tech and the California Department of Fish and Wildlife and/or United States Fish and Wildlife Service. If for any reason a bird nest must be removed during the nesting season, the project proponent shall provide written documentation providing concurrence from the appropriate resource agencies (e.g., California Department of Fish and Wildlife and United States Fish and Wildlife Service) authorizing the nest relocation.

Question IV.e: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (No Impact)

The project will not trim, prune, or remove any existing vegetation and does not conflict with any local policies or ordinances protecting biological resources. *No impact* would occur.

Question IV.f:Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (No Impact)

The project is not within any areas specified in any identified Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans. As such, the project would result in *no impact* to conservation plans.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL AND PALEONTOLOGICAL RESOURCES				
Would The Project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco *Planning Code*?	☐	☒	☐	☐

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Cultural resources are locations of human activity, occupation, or use. The term includes archaeological sites, buildings, structures, and places associated with the traditional cultural practices or beliefs of a living community. Paleontological resources are the fossilized remains of plants and animals, including vertebrates (animals with backbones), invertebrates (such as starfish, clams, ammonites, and coral marine), and fossils of microscopic plants and animals (microfossils). Paleontological resources are distinct from archeological resources in that they are records of past plant and animal life and not human history.

Regulatory Setting

Because the proposed project requires a permit from the USACE, it is subject to federal historic preservation laws, procedures, and requirements in addition to state and local laws and planning guidance and regulations. The principal federal law addressing cultural resources is the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C Section 470), and its implementing regulations (36 CFR 800). The regulations commonly referred to as the Section 106 process describe the procedures for identifying and evaluating historic properties, for assessing the effects of federal actions on historic properties, and for project proponents consulting with appropriate agencies to avoid, reduce, or minimize adverse effects. Historic properties are cultural resources that meet specific criteria for listing on the National Register of Historic Places (NRHP).

The CEQA Guidelines define a historical resource as: (1) a resource in the California Register of Historic Places (CRHR); (2) a resource included in a local register of historical resources, as defined in Public Resources Code (PRC) Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered by a lead agency to be "historically

significant" if the resource meets the criteria for listing on the CRHR (PRC 5024.1). CEQA requires evaluation and consideration of impacts on historical resources.

The guiding policy for historic and archaeological resources in the City of Alameda General Plan include provisions to protect historic sites and archaeological resources for their aesthetic, scientific, educational, and cultural values. Implementing policies include working in conjunction with the California Archaeological Inventory, review proposed development projects to determine whether the project sites contains known prehistoric or historic cultural resources and to assess the potential for discovery of additional cultural resources and requirements that areas found to contain significant historic or prehistoric archaeological artifacts be examined by a qualified consulting archaeologist or historian for appropriate protection and preservation.

A variety of federal and state statutes and review processes address paleontological resources, including the Antiquities Act of 1906 (16 U.S.C. 431-433), National Registry of Natural Landmarks (16 U.S.C. 461-467), the Paleontological Resources Preservation Act of 2009, NEPA, and CEQA. Section 50987.5 of the California Public Code Section states: "No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands." Paleontological resources are not specifically addressed by the City of Alameda General Plan.

Questions V.a, b and d: Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code? Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? Disturb any human remains, including those interred outside of formal cemeteries? (Less Than Significant With Mitigation)

No historical resources are known or expected to be directly or indirectly affected by dredging and dewatering under the proposed project. The artificial lagoons, staging areas, and surrounding developments represent a highly altered natural environment that is unlikely to include intact archaeological resources, undiscovered human remains, or other places associated with traditional cultural practices of beliefs of a living community. There are no historic buildings or structures that would be directly affected by the project, and alterations to the visual setting of any historic building or structure that could be near the project would be short-term, temporary and would not materially impair the resource. However, there is the potential for undiscovered historical resources, archaeological sites, and human remains to be present and affected by the project. Standard identification and unanticipated discovery mitigation measures, described as *Mitigation Measure CUL-1: Cultural Resources Record Search,* and *CUL-2: Accidental Discovery of Human Remains,* will be implemented to ensure that work would be suspended in the immediate area of the find; identify and evaluate the

significance of the discovery; and if significant, determine what measures would be taken to avoid, recover, or mitigate impacts on the resource. Implementation of these mitigation measures will ensure that any potential impacts are *less than significant*.

Mitigation Measure CUL-1: Cultural Resources Record Search

Prior to commencement of project activities, a record search will be conducted to confirm that there are no recorded cultural resources in the project area. Pursuant to CEQA Guidelines Section 15064.5 (f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted. Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during the project, all work within 100 feet of the resources shall be halted and the project applicant or lead agency shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified archaeologist would meet to determine the appropriate avoidance measures or other appropriate measure. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.

In considering any suggested measure proposed by the consulting archaeologist to mitigate impacts to historical resources or unique archaeological resources, the project applicant must determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (such as data recovery) must be instituted. Work may proceed on other parts of the project site while measures for historical resources or unique archaeological resources are carried out.

Mitigation Measure CUL-2: Accidental Discovery of Human Remains

In the event that human skeletal remains are discovered as part of the project, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and following the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the city shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 100-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan will be prepared with specific steps and the timeframe required to resume construction activities. Monitoring, data recovery, and determination of significance and avoidance measures (if applicable) shall be completed expeditiously and evaluate whether there are areas that may be sensitive.

Question V.c: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (No Impact)

No unique paleontological or geologic resources are known or expected to be directly or indirectly affected by the dredging and dewatering under the proposed project. The project has very little potential to encounter rock units or formation deposits with potential to yield significant fossils. Work would be limited to depths that would encounter only the recently deposited sand, muds, and artificial fill. These recent deposits are unlikely to preserve the remains of organisms based on the lack of time and burial needed for the organisms to be fossilized. In addition, artificial fills are man-made, have been mixed and reworked from native geologic materials, and therefore are not fossil-yielding. *No impact* would occur.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS				
Would the Project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Setting

Local Geology

The project area is located in a part of Alameda that was created by infilling with artificial fill (R.W. Graymer 2000). Artificial fill near the project area is expected to be up to 15 feet thick. Under the fill is native geologic material consisting of unconsolidated marine clays known as Bay Mud (USGS 2000). Dredging of the lagoons is not expected to disturb native geologic material. The goal of the dredging will be to remove approximately 12,000 cubic yards of nuisance sediment and debris that has accumulated in the lagoons. The lagoons are artificial and do not have a natural outflow to prevent the buildup of sediment.

Soils

The project site is located almost entirely on artificial fill and nearly devoid of natural soils. The United States Department of Agriculture Natural Resource Conservation Service (NRCS) has characterized soils in the vicinity of the project site as "Urban Land" and "Fill" soils (NRCS 2013). Urban land refers to areas that are so altered or obstructed by urbanization—such as buildings, pavement, and cut and fill operations—that identification of the native soils is not feasible.

Regional Faults and Seismic Hazards

The physical properties of the site's underlying geology are crucial factors in assessing the site's susceptibility to geologic and seismic hazards. Earthquakes are a significant hazard in the San Francisco Bay area, including the project site, as several active and potentially active faults are in the region (ABAG 2013a). The Pacific and North America Plate boundary in the San Francisco Bay area is no longer a subduction zone (the process that created many of the exposed rocks in the area). Today, the plates are sliding past each other, creating the transform faults known as the San Andreas Fault and Hayward Faults Zones (Stoffer, P.W., and Gordon, L.C., eds. 2001).

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1971 provides laws meant to reduce loss of life and property associated with surface fault rupture throughout the State of California. The act requires earthquake faults to be identified and zoned to ensure public safety. Safety is protected by prohibiting building most structures for human occupancy across active faults that are a potential hazard (CDC 2013a).

The California Alfred E. Alquist Seismic Safety Commission was established in 1975 when the Seismic Safety Act was passed. The Seismic Safety Act was made based on evidence for the following: "First, many different agencies at various levels of government have substantial responsibilities in the fields of earthquake preparedness and seismic safety. Second, there is a pressing need to provide a consistent policy framework and a means for coordinating on a continuing basis the earthquake-related programs of agencies at all governmental levels and their relationships with elements of the private sector involved in practices important to

seismic safety. This need is not being addressed by any continuing state government organization. Third, through concerted efforts of broad scope, coordinated by a Seismic Safety Commission, long-term progress should be made toward higher levels of seismic safety. Fourth, it is not the purpose of this chapter to transfer to the commission the authorities and responsibilities now vested by law in state and local agencies (Seismic Safety Act 2006)."

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 directs the State of California Department of Conservation, California Geological Survey, Seismic Hazards Zonation Program, to "identify and map areas prone to liquefaction, earthquake-induced landslides and amplified ground shaking." The purpose of the act is to mitigate damage to property and loss of life by identifying, evaluating, and minimizing seismic hazards (CDC 2013b).

The dredging, dewatering, and general construction staging associated with the project have the potential to affect environmental factors including geology and soils. Dredging will be performed via mechanical/excavator dredge with the material placed into barge-mounted scows for dewatering.

Question VI.a: Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: (Less Than Significant)

Seismic Hazards

The San Andreas Fault is approximately 15 miles west of the project site, and the Hayward Fault is approximately 5 miles east (USGS 2000). An April 2008 report called the Uniform California Earthquake Rupture Forecast was prepared in coordination with the California Geological Survey. The report concluded that there is a 63 percent probability that a 6.7 magnitude or greater earthquake would occur in the greater San Francisco Bay area in the next 30 years (2007 Working Group on California Earthquake Probabilities 2008). If an earthquake of this magnitude occurred at the Hayward Fault or San Andreas Fault, the project area would likely experience strong to very strong ground shaking. Those faults farther from the project area would likely cause moderate to strong ground shaking at the project area (ABAG 2013a).

Landslide and Debris Flow Hazards

Landslides and debris flows can be a serious hazard to life and property in hillside terrain. Landslides rarely threaten life directly because they move relatively slowly, compared with debris flows or mudslides. Landslides occur in response to changes in water content, ground shaking, increased load, or removal of downslope support. They can result in damage to building foundations, road offset, or damage to underground utilities. The distinctive topographic shapes created by landslides can persist in the landscape for thousands of years. Debris flows or mudslides are flows of mud that might include rocks, vegetation, and debris. They are characterized by rapid movement and sudden onset after intense rainfall, and are, as a result of these attributes, a hazard to life and property during and immediately following a triggering rain event. Debris flows are more likely on steep, concave parts of hillsides. The project area is essentially flat terrain, where landslides and debris flows do not occur (USGS 1997).

Liquefaction

Liquefaction is a phenomenon where the strength and stiffness of a soil is reduced by earthquake shaking or other rapid loading. Liquefaction occurs in saturated soils, that is, soils in which the space between individual particles is completely filled with water. Liquefaction hazards in the vicinity of the project area are moderate to high (ABAG 2008a).

The project will not result in an increased exposure to potential adverse effects associated with seismicity. Adverse effects associated with seismicity include the risk of loss, injury, or death from the rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure (including liquefaction), or landslides, and would be *less than significant*.

Question VI.b: Result in substantial soil erosion or the loss of topsoil? (Less Than Significant With Mitigation)

In general, project related construction activities could disturb vegetation and ground cover that stabilizes surface soils, making the project site soils more susceptible to erosion. Without proper soil stabilization controls, construction activities such as dredging, backfilling, and grading could also increase the potential for exposed soils to be eroded by wind or stormwater runoff, resulting in soil loss. Project construction could also result in the loss of topsoil—a fertile soil horizon that typically contains a seed base if there is a well-developed topsoil horizon and it is mixed with other soil horizons or otherwise lost during excavation and backfilling. The project site is nearly flat and is composed of the lagoon surface water and construction staging areas. Most of the project activities will take place on the surface water of the lagoons where there will be limited exposure to soils; however, land-based construction staging has the potential to cause erosion and loss of soil.

The dredging activities associated with the project are not expected to undermine the stability of the concrete retaining walls that provide structural integrity for the lagoon system shoreline. Compromising the retaining walls has the potential to cause shoreline erosion. The project objective is to remove excess sediment accumulated after construction of the lagoons. Disturbance of as-built structural components of the lagoons, including any soil or fill not accumulated after the initial construction of the lagoons, should be avoided. Removal of the sediment accumulated after the lagoons were constructed should not compromise the integrity of the concrete retaining walls of the lagoon system. The dredging activities would not occur within close proximity to the location of the retaining walls, ensuring that dredging does not potentially impact their foundations.

Impacts to erosion of soil and loss of topsoil would be reduced to *less than significant* by implementing *Mitigation Measure HW-1: BMPs and Erosion Control Measures.*

Question VI.c: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? (No Impact)

The proposed project would be on a geologic unit and soil that is unstable and could result in lateral spreading, subsidence, liquefaction, or collapse in the event of a large earthquake;

however, these characteristics would not be exacerbated as a result of implementing the project. The project area is essentially flat terrain, where landslides and debris flows do not occur (USGS 1997). Accordingly, *no impact* to these geologic units would occur.

Questions VI.d and VI.e: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property? Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? (No Impact)

Expansive soil at the project site would not present a risk to life or property because the project does not include construction of any buildings for which Table 18-1-B of the Uniform Building Code would apply. Similarly, installation of septic tanks or alternative wastewater disposal systems is not included in the project, so soil capable of adequately supporting such improvements is not required. *No impact* would occur.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS				
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Setting

GHGs are components of the atmosphere that trap heat relatively near the surface of the earth, and therefore, contribute to the greenhouse effect and climate change. Most GHGs occur naturally in the atmosphere, but increases in their concentration result from human activities such as the burning of fossil fuels. Global temperatures are expected to continue to rise as human activities continue to add CO_2, methane, nitrous oxide, and other greenhouse (or heat-trapping) gases to the atmosphere. To account for the differences in the warming effect of various greenhouse gases, emissions of various gases are often expressed in units of $C0_2$ equivalents ($C0_2e$). This represents the amount of $C0_2$ that would have the same relative warming effect as the actual combination of greenhouse gases emitted (EPA 2013a and IPCC 2007).

The CARB estimated that in 2011 California produced about 448 million metric tons of $C0_2e$ ($MMTC0_2e$) (CARB 2011). The CARB found that transportation is the source of 38 percent of the state's GHG emissions, followed by electricity generation at 19 percent and industrial sources at 21 percent. Commercial and residential fuel use (primarily for heating) accounted for 10 percent of GHG emissions. The Bay Area accounts for approximately 20 percent of the state's GHG emissions with 96 $MMTCO_2E$ emitted in 2007. Fossil fuel consumption in the

transportation, industrial and commercial sectors combined account for 72 percent of the Bay Area's GHG emissions; power generation accounts for 16 percent; followed by residential fuel usage at 7 percent, off-road equipment at 3 percent and agriculture at 1 percent (BAAMD 2010b).

Question VII.a: Would the proposed project generate greenhouse gas emissions that may have a significant impact on the environment? (Less Than Significant)

During the project, GHG emissions would result from the use of fossil fuels used in heavy equipment, trucks, and personal operating vehicles. Dredges and excavators would move the excavated material to the on-road trucks; delivery and material transport trucks would bring equipment and materials to and from the site; and finally, most workers would arrive at the site by personal vehicle using some amount of fossil fuel. BAAQMD has not adopted a threshold of significance for construction-related GHG emissions. GHG emissions that would occur during the project are outlined in Table 3. Although there is no threshold of significance for construction activities, the threshold of significance for land use development projects was included for comparative purposes.

TABLE 3 – SUMMARY OF GHG EMISSIONS

Emissions Component	Dredging CO_2 Emissions	
	[Pounds Per Day (lb/day)]	**[Metric Tons per Year (MT/yr)]**
Heavy Equipment Emissions	3,829	418
Hauling Emissions	283	31
Worker Commutes	998	109
TOTAL	5,109	557
BAAQMD threshold	NA	1,100*
Above threshold?	No	No

* Although there is no threshold of significance for construction activities, the threshold of significance for land use development projects was used for comparative purposes.

Source: CARB 2013 and SMAQMD 2013.

Activities may include GHG emissions from compounds within the lagoon native material such as CO_2 or methane. Although somewhat sequestered, unlike fossil fuels, carbon associated with these materials is a part of the short-term carbon cycle and would not represent a long-term increase in the overall atmospheric concentrations of greenhouse gases. Since unmitigated dredging emissions would be below the significance thresholds specified by the Air Quality Guidelines, it is expected that the overall emissions of GHG would be limited. Any natural emissions associated with dredging material would end with the completion of the project or soon after. These effects would be minor.

BAAQMD Air Quality Guidelines recommend the following BMPs for "construction projects," as applicable (BAAQMD, 2012):

- Use alternative fuel in heavy equipment for at least 15 percent of the fleet
- Use local building materials comprising at least 10 percent of all building materials
- Recycle at least 50 percent of construction waste or demolition materials

There would be no building materials, construction waste, or demolition debris for this project; therefore, BMPs relating to these materials are not feasible. Alternatively fueled equipment may be used; however, based on the limited size of the project, this equipment would not be necessary to meet air quality thresholds as outlined in the Air Quality Section, and would not be necessary to meet or comply with any significance thresholds or permitting requirements under GHG. Notably, the BMP outlined in the Air Section would reduce the overall GHG emissions as well, and the actual overall emissions would be less than those shown in this report.

The project would involve no long-term emissions of greenhouse gases. There would be no additional infrastructure, no new stationary sources of GHG emissions, no periodic maintenance activities, or long-term ongoing sources of GHG emissions of any kind. GHG emissions would end with completion of the project. These effects would be *less than significant*.

Question VII.b: Would the proposed project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (Less Than Significant)

In 2006, the California legislature passed AB 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq.), also known as the Global Warming Solutions Act. Pursuant to AB 32, CARB adopted a scoping plan, outlining measures to meet the 2020 GHG reduction limits. To meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 "business as usual" emissions levels or about 15 percent from today's levels (CARB 2010). The scoping plan estimates a reduction of 174 $MMTCO_2E$ (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and high global warming potential sectors.

Based on the BAAQMD's 2012 *CEQA Air Quality Guidelines*, projects that are consistent with San Francisco's *Strategies to Address Greenhouse Gas Emissions* would result in a *less than significant impact* to GHG emissions. In addition, San Francisco's strategy is consistent with AB 32 goals; therefore, projects consistent with San Francisco's strategy would [by definition] not conflict with the State's plan for reducing GHGs (San Francisco 2010 and CARB 2010).

The short-term GHG emissions associated with the project would not conflict with any goals set by the BAAQMD to achieve the Bay Area's implementation of AB 32, including the long-term goal to reduce greenhouse gas emissions to 1990 levels by 2020. The project would be consistent with San Francisco's Strategies to Address Greenhouse Gas Emissions by complying with all the applicable guidelines and regulations. The project would have no long-

term emissions of greenhouse gases (San Francisco 2012). There would be no additional infrastructure, no new stationary sources of GHG emission, no periodic maintenance activities, or long-term ongoing sources of GHG emission of any kind. GHG emissions would end with completion of the project. These effects would be *less than significant*.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d) Be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands??	☐	☐	☐	☒

Regulatory Setting

The State of California defines hazardous materials as substances that are toxic, ignitable or flammable, reactive, or corrosive. California also defines an extremely hazardous material as a

substance that shows high acute or chronic toxicity, is carcinogenic, has bioaccumulative properties, is persistent in the environment, or is water reactive (California Code of Regulations, Title 22; California Health and Safety Code, Division 20, Chapter 6.5). A release of hazardous materials is any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of into the environment, unless permitted or authorized by a regulatory agency (California Government Code, Section 25501. Health and Safety).

Department of Toxic Substances Control

State regulations require planning and management to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human and environmental health. The Resource Conservation and Recovery Act (RCRA) is the principal federal law governing the disposal of solid waste and hazardous waste. The Department of Toxic Substances Control (DTSC) is a sub agency of the California State Environmental Protection Agency (Cal/EPA), and is authorized to enforce the provisions of RCRA. Cal/EPA adopted regulations developed in the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program that is implemented at the local level.

The Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in California. It regulates a number of types of wastes and waste management activities that are not covered by federal law with RCRA. The DTSC enforces the HWCL and tracks hazardous waste shipments through the state.

State Water Resources Control Board

As discussed in Section IX (Hydrology and Water Quality), the State Water Resources Control Board (SWRCB) has the authority to preserve and enhance water resources in the state. The SWRCB regulates and maintains records of releases of hazardous substances and petroleum-based materials and releases that could affect groundwater or surface water.

California Occupational Safety and Health Administration (Cal/OSHA)

Handling of hazardous or potentially hazardous materials would occur in accordance with the California Occupational Safety and Health Administration (Cal/OSHA).

Alameda County Environmental Health Department

Alameda County is responsible for enforcing the state regulations, within both the City of Alameda and the County, governing hazardous substance generation and storage. The Alameda County Environmental Health Department regulates the use, storage, and disposal of hazardous substances in the county by issuing permits, monitoring regulatory compliance, and other enforcement activities.

Environmental Setting

The project involves dredging, excavation, hauling, and disposal of sediment buildup in the Alameda lagoon system to improve its water quality and habitat suitability. A sediment characterization effort was conducted for the project site in 2010, 2011, and 2013. Vertical core composite samples were collected from 1- to 5.8-foot depths (average lagoon depth is 3 feet). The samples indicated elevated levels of: arsenic, cadmium, lead, and zinc (metals); benzo(a)pyrene and dibenzo(a,h)anthracene (polycyclic aromatic hydrocarbons [PAHs]); diesel range and residual range organics (volatile organic compounds [VOCs]); 4,4'-dichlorodiphenyl dichloroethane (DDD) (pesticide); and low levels of cesium, radium, thorium, and uranium (radionuclides) (ALS Environmental 2013; CLE Engineering, Inc. 2013).

Question VIII.a: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Less Than Significant with Mitigation)

The proposed project would entail the dredging and removal of sediments with elevated concentrations of metals, PAHs, VOCs, and low-level radionuclides. Although detections from composite samples show a range of concentrations of these constituents, these soils are consistent in quality with other fill soils accepted at Alameda Point Site 1 (CLE Engineering, Inc 2013).

If TSS are determined to be above the allowed background level,the project would propose installation of silt curtains where the sediment removal is taking place, which would eliminate any suspended solids from migrating. The City's Public Works and Police Departments have approved an established truck route to transport the dredged material. In addition, implementing *Mitigation Measure HAZ-1: Site Health and Safety Plan*, and *Mitigation Measure HAZ-2: Management of Soil*, would ensure proper handling of any contaminated soils encountered at the project site. With implementation of *Mitigation Measures HAZ-1* and *HAZ-2*, the potential project related impacts from potential exposure to hazardous materials would be *less than significant*.

Mitigation Measure HAZ-1 – Site Health and Safety Plan

A site health and safety plan (HASP) shall be prepared by the contractor in accordance with federal and state OSHA requirements, and appropriate personal protective equipment shall be used and waste management procedures implemented based on the plan. The HASP will include procedures required to handle and mitigate potential risk from direct contact with contaminated soil during excavation. This plan will describe training requirements and certifications needed for personnel who would be involved with the removal of lead-contaminated material. Adherence to this plan will reduce the potential hazard posed by contaminated sediment to the public and environment to less than significant.

Mitigation Measure HAZ-2 – Management of Soil

The project sponsor shall obtain representative samples of dredged material to confirm the appropriate disposal methods. All soil encountered during project activities shall be assumed to contain elevated levels of contaminants and shall be managed appropriately until laboratory testing confirms suitability. Access to the support and work areas will be controlled by fences, and signage to prevent entry by unauthorized personnel and vehicles. Dust generation is not a major concern because the sediment will be placed on trucks to be transported off site as the moisture evaporates. Soil will be covered during transport to the Alameda Point IR Site 1 landfill.

Question VIII.b: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (Less Than Significant with Mitigation)

With implementation of *Mitigation Measures HW-1: Best Management Practices (BMPs) and Erosion Control Measures, Mitigation Measure HW-2: Management of Dewatering Discharges, Mitigation Measure HAZ-1: Site Health and Safety Plan,* and *Mitigation Measure HAZ-2: Management of Soil,* the potential project-related impacts through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be *less than significant*.

Question VIII.c: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Less Than Significant)

The proposed project is located within a quarter mile of Donald D. Lum Elementary School, Wood Middle School, Otis Elementary School, and St. Joseph Notre Dame High School. On-site handling and storage of hazardous materials would take place in accordance with all applicable local, state, and federal regulations. Adherence to all applicable regulations and implementation of the mitigation measures discussed above would reduce potential impacts associated with the project's proximity to area schools to *less than significant.*

Question VIII.d: Be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (No Impact)

Former leaking underground storage tank sites are located along the lagoon, however the project site is not included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 (DTSC 2013a, 2013b; SWRCB 2013a); therefore, *no impact* would occur.

Question VIII.e: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? (No Impact)

The project area is not within the Airport Influence Area (AIA) for Oakland International Airport (OAK); however, the project area is approximately 0.5 mile of the northern AIA boundary for OAK (CDA 2010). The location of the project area in relation to the AIA for OAK would not result in a safety hazard related to nearby airport operations for people residing or working in the project area. Therefore, *no impact* would occur.

Question VIII.f: For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (No Impact)

The proposed project is not located within 2 miles of a private airstrip. Therefore, *no impact* would occur.

Question VIII.g: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (No Imapct)

The proposed project does not include the shutdown of any major roadways in the City of Alameda that would impair traffic flow for a designated emergency evacuation route. The proposed project would be subject to compliance with all applicable provisions of the *Alameda County Emergency Operations Plan* as it is within the operational area covered by the plan (Alameda County 2007). Implementation of the proposed project would have *no impact* related to interference with an emergency response plan or emergency evacuation plan.

Question VIII.h: Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? (No Impact)

The project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. The project is not located in an area where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, therefore *no impact* would occur.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☒	☐	☐

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site?	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
f) Otherwise substantially degrade water quality?	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Setting

Groundwater

All groundwater is considered suitable, or potentially suitable, for municipal or domestic use unless otherwise designated by the SWRCB. The SWRCB seeks to maintain a high-quality drinking groundwater resource wherever it is present by limiting bacteria, organic and inorganic chemical constituents, and maintaining acceptable taste and odor so that potential beneficial uses are not adversely affected (SFBR 2011). Groundwater at the project site is seasonally and tidally influenced. Depth to groundwater is expected to be fluctuate between approximately 3 and 10 feet below ground in the vicinity of the project site.

Surface Water

The lagoons contain salt water that is pumped from the San Francisco Bay through a network of culverts. Given the proximity of the project site to the San Francisco Bay it is expected that

the shallow groundwater in the vicinity of the project site is brackish, containing levels of salt that would prohibit many beneficial uses.

Clean Water Act

The Clean Water Act established water quality standards for surface waters and the basis for regulating the discharge of pollutants into the waters of the United States. Under the Clean Water Act the EPA has implemented pollution control programs including wastewater standards for industry and water quality standards for contaminants in surface water. It became unlawful to discharge any pollutant from a point source (a discrete conveyance such as a pipe or man-made ditch) under the Clean Water Act, unless a permit was obtained. The EPA National Pollutant Discharge Elimination System (NPDES) controls discharges of pollutants to navigable waters by requiring permits that help regulate point source discharges from industry, municipalities, and other facilities (EPA 2013b).

The project requires U.S. Army Corps of Engineers permit authorization to work within the navigable waters of the United States under Section 404 of the Clean Water Act. Section 404 establishes a program to regulate the discharge of dredge or fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (EPA 2013c).

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act was enacted in the State of California in 1969 to protect water resources, including groundwater. Through this legislation, the California SWRCB and its nine Regional Boards were given authority to preserve and enhance water resources in the state. The legislature "finds and declares that the people of the state have a primary interest in the conservation, control, and utilization of the water resources of the state, and that the quality of all the waters of the state shall be protected for use and enjoyment by the people of the state" (SWRCB 2013b).

The SWRCB carries out its duties under the Porter-Cologne Water Quality Control Act through regional, water basin plans. The project area is in the California Regional Water Quality Control Board San Francisco Bay Region jurisdiction. The San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan) is the master document for protecting water resources in the region (SFBR 2011).

Any construction activities more than 1 acre would require coverage under the SWRCB NPDES General Permit for Discharges from Construction Activities, Order No. 2010-0014-DWQ, NPDES No. CAS000002 (Construction General Permit) (SWRCB 2011). This general permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) and the implementation of BMPs to minimize offsite sedimentation during construction projects.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife is responsible for conserving, protecting, and managing the state's fish, wildlife, and native plant resources. Fish and Game Code, Section 1602 requires that the agency be notified of proposed actions that may substantially modify a river, stream, or lake, including ephemeral streams, desert washes, and watercourses. If it is determined that the proposed activity may adversely affect fish and wildlife resources, then a Streambed Alteration Agreement would be prepared to comply with CEQA. The proposed action would proceed in accordance with the agreement (CDFW 2013).

Local

The AWLHOA and the City of Alameda have been working together to address the accumulation of sediment and water quality degradation in all five lagoons. The lagoons are filled with water pumped from the San Francisco Bay and discharges from City of Alameda storm drains. As a result, the depths of surface water in the lagoons have been decreasing over the past few decades as more sediment accumulates. A group of contractors led by CLE Engineering Inc. (CLE) has conducted bathymetry surveys to map the bottom of the lagoons to define priority areas for sediment removal. CLE has conducted sediment sampling for potential contaminants to determine where the dredge spoils could be disposed of. Based on the sediment sample results, it was determined that the sediment was not appropriate for disposal in the San Francisco Bay. The proposed land-based disposal site is the Alameda Point, IR Site 1, at the Alameda Naval Air Station, a closed Navy installation and EPA National Priorities List site (AWLHOA 2011).

Question IX.a: Would the project violate any water quality standards or waste discharge requirements? (Less Than Significant With Mitigation)

Project activities during the wet season could increase erosion and affect surface water quality in the short term by discharging sediment (and pollutants bound to sediment) and other pollutants associated with construction, such as trash, paint, solvents, sanitary waste from portable restrooms or sewage treatment facilities, and concrete curing compounds. The discharge of these pollutants during construction could impair the quality of any surface water flowing into the San Francisco Bay. The project is subject to the requirements of the NPDES Construction General Permit because project area construction exceeds 1 acre. To obtain coverage under the Construction General Permit, the project applicant must provide, by electronic submittal, a notice of intent, a SWPPP, and other documents required by Attachment B of the Construction General Permit. Activities subject to the Construction General Permit include clearing, dredge and fill activities, grading, and disturbances to the ground. Construction activities covered under the Construction General Permit are regulated at the local level by the San Francisco Bay Region of the California Regional Water Quality Control Board (SWRCB 2011).

The Construction General Permit exercises a risk-based permitting approach and mandates certain requirements based on the risk level of the project (Level 1, Level 2, or Level 3). The risk levels are based on the risk of sediment discharge and risk to the receiving water. The

sediment discharge risk depends on the project location and timing (wet season versus dry season). The receiving water risk depends on whether the project would discharge to sediment-sensitive receiving waters, defined by specific beneficial uses of the receiving water in the Basin Plan, a listing on the 303(d) list based on sediment impairment, or a total maximum daily load (TMDL) in place to address the potential for excessive sedimentation (SWRCB 2011).

The performance standard in the Construction General Permit is that dischargers shall minimize or prevent pollutants in stormwater discharges and authorized discharges unrelated to stormwater. Discharges would be limited through controls, structures, and management practices that achieve best available technology (BAT) for treatment of toxic and nonconventional pollutants and best conventional technology (BCT) for treatment of conventional pollutants[1]. The permit requires minimum BMPs implemented at all sites and imposes numeric action levels for Level 2 and Level 3 projects and numeric effluent limits for pH and turbidity at for Level 3 projects (SWRCB 2011).

The construction SWPPP will be prepared by a qualified SWPPP developer to meet the certification requirements in the Construction General Permit. The SWPPP will require that:

- All pollutants and their sources, including sources of sediment associated with construction, construction site erosion, and all other activities associated with construction would be controlled;
- Where not otherwise required to be under a Regional Board permit, all discharges unrelated to stormwater would be identified and eliminated, controlled, or treated;
- Site BMPs would be effective and would reduce or eliminate pollutants in stormwater discharges and authorized discharges unrelated to stormwater from construction to the BAT/BCT standard;
- Calculations and design details, and BMP controls for site run-on, would be complete and correct; and
- Stabilization BMPs would be installed after construction to reduce or eliminate pollutants.

The SWPPP will include BMPs for:

- Erosion control (including wind erosion) and tracking controls to minimize tracking of mud from the site,
- Sediment control,
- Controls for water discharges unrelated to stormwater (such as water from vehicle and equipment cleaning), and
- Waste management and materials pollution control.

Additionally, *Mitigation Measure HW-1: Best Management Practices (BMPs) and Erosion Control Measures*, will ensure that project BMPs reduce any potential impacts to water quality to a *less than significant* level.

> **Mitigation Measure HW-1: Best Management Practices (BMPs) and Erosion Control Measures**
>
> Erosion control measures and BMPs shall be implemented to minimize the effects of erosion, sedimentation, and leakage of vehicle and equipment fluids and shall be developed further in the project-specific SWPPP prepared by the contractor, in accordance with the requirements of the General Construction Permit. The BMPs described in the SWPPP shall require review and approval by the RWQCB. BMPs implemented as part of the proposed project could include the measures described below. The measures could be altered, supplemented, or deleted during the RWQCB review process. Implementation of these measures shall help meet the relevant water quality objectives included in the Basin Plan (for example, maintain beneficial uses of receiving waters, not create floating material or visible film at the water surface, and prevent toxic substances in concentrations that would adversely affect aquatic life in receiving waters) (SWRCB 2011).

The majority of dewatering activities associated with the project will occur as the dredged material is brought from the bottom of the lagoons during removal. Dewatering activities are not expected to generate water requiring containment or disposal on land. Excess water brought up with the dredged material will be allowed to drain back into the lagoon at the priority area where the dredging occurred, before being loaded on the barge. If a silt screen is required to contain Total Suspended Solids (TSS) concentrations above background levels, dewatering of the dredged material will occur within that area. Dewatering activities will be performed per the requirements of a dewatering plan as defined in *Mitigation Measure HW-2: Management of Dewatering Discharges*.

> **Mitigation Measure HW-2: Management of Dewatering Discharges**
>
> The project contractor shall prepare a project-specific dewatering plan to address potential impacts of dewatering discharges during construction on the water quality of receiving water bodies and to comply with the NPDES requirements. The discharges shall be handled in accordance with the General Construction Permit and shall be developed and approved before dredging. The dewatering management plan shall specify methods for collecting, transporting, treating, and discharging all water produced by construction site dewatering. Applicable BMPs shall be identified in the dewatering management plan to ensure that discharges to receiving waters meet applicable water quality objectives.

Question IX.b: Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-

existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted) (Less Than Significant With Mitigation)

During dredging, surface water will be removed along with sediment. The dredged material will be dewatered before it is removed so that temporary drawdown of surface water would be limited to small quantities removed with the dredged sediment. The project will require dewatering of surface water removed with the dredged material, but groundwater would not be substantially depleted as a result. Use of groundwater resources would not be required during implementation of the proposed project. A management plan for dewatering would be implemented as described under *Mitigation Measure HW-2*. Incorporation of this mitigation measure will ensure that any impacts to groundwater supply or recharge from implementation of the proposed project are *less than significant*.

Question IX.c: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site? (Less Than Significant With Mitigation)

The proposed project would not substantially alter the drainage pattern of the site or area. The primary objective of the project is to remove accumulated sediment from the project lagoon system, which has been causing the depth of surface water to decrease over the past few decades. The lagoon system is man-made and does not have a natural outflow. Accumulating sediment and debris have become a nuisance and require removal. The removal of sediment from the lagoon system could result in substantial erosion or siltation on or off site. Any potential erosion siltation related to construction activities would be reduced to a *less than significant* level by implementing *Mitigation Measure HW-1: BMPs and Erosion Control Measures*.

Question IX.d: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? (No Impact)

The dredging and construction staging associated with the proposed project would not substantially alter the drainage pattern of the site or area. Nor would the project alter the course of a stream or river, substantially increasing the rate or amount of surface runoff in a manner that would result in flooding on or off site. *No impact* would occur.

Question IX.e: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (Less Than Significant With Mitigation)

The proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The dredged material will be dewatered before being removed from the lagoons for disposal, and any runoff created by not properly dewatering the dredge material will be mitigated though implementing a management plan for dewatering, including BMPs for

controlling, handling, and if necessary disposing water that separates from sediment after the initial dewatering of the dredged material in the dredge bucket. For example, the roll-off bins used to transport the dredge material to Alameda Point IR Site 1 would be lined with plastic, and be in such a condition that any water not removed from the dredged material during dewatering of the dredge bucket would be adequately contained. The management plan for dewatering would cover water that separates from the dredged sediment on the barge and during transfer of the sediment from the barge to trucks (*Mitigation Measure HW-2*).

The proposed schedule of June through August 2014 occurs entirely in the non-rainy season, the rainy season is defined as being from October 1 through April 30 (SWRCB 2013c). Through implementation of *Mitigation Measure HW-1,* any stormwater discharges at the project area will be monitored to ensure that pollutants are not allowed to comingle with stormwater. No other runoff is expected to be a part of the proposed project, and impacts would be *less than significant*.

Question IX.f: Otherwise substantially degrade water quality? (Less Than Significant With Mitigation)

Water quality degradation associated with the proposed project could occur as a result of project activities. Project activities could increase erosion and affect surface water quality in the short term by discharging sediment (and pollutants bound to sediment) and other pollutants associated with construction, such as trash, paint, solvents, sanitary waste from portable restrooms or sewage treatment facilities, and concrete curing compounds. Implementing *Mitigation Measure HW-1* would provide an adequate control of potential degradation of water quality.

The dredging activities associated with the project have the potential to cause an increase of suspended solids in the lagoons if suspended solids are not properly managed during dredging of the priority areas. Implementing *Mitigation Measure HW-3: Management of Siltation from Dredging Activities* would provide an adequate control of potential degradation of water quality associated with the dredging activities, and impacts would be *less than significant*.

Mitigation Measure HW-3: Management of Siltation from Dredging Activities

The dredging associated with the project has the potential to cause an increase of suspended solids in the lagoons if suspended solids are not properly managed during dredging of the priority areas. The project contractor shall segregate the priority areas by installing silt curtains during dredging if the TSS concentrations during dredging exceed background concentrations established before dredging. The silt curtain will help prevent suspended solids from increasing TSS concentrations in areas of the lagoon not being dredged. If the solids do not settle, a polymer system on a barge will use a small amount of polymer re-circulate to aid the settling of suspended solids through coagulation and flocculation processes. The clear water produced by these processes would be discharged back into the lagoon waters and the generated sediment would be disposed of with the dredged material at Alameda Point IR Site 1.

A waste characterization effort was conducted for the project site in 2010, 2011, and 2013. Composite sediment samples were collected from 1- to 5.8-feet below the surface of the bottom of the lagoons. The samples indicated the presence of arsenic, cadmium, lead, and zinc (metals); benzo(a)pyrene and dibenzo(a,h)anthracene (PAHs); diesel range and residual range organics (VOCs); DDD (pesticide); and low levels of cesium, radium, thorium, and uranium (radionuclides) (ALS Environmental 2013; CLE Engineering, Inc. 2013). There is a potential that the contaminants in sediment will be mobilized during dredging. This could cause an increase in Total Dissolved Solids (TDS) in the water column, including dissolved contaminants (depending on chemical dissolution and solubility characteristics). The chemical concentrations and types of chemicals detected in sediment are not likely to contribute to dissolved contamination in lagoon surface water, assuming that siltation as a result of the dredging activities is effectively controlled. To ensure that the levels of dissolved contaminants in the lagoon surface water do not increase to unacceptable levels as a result of excessive siltation from the proposed project, *Mitigation Measure HW-3* will be implemented.

Question IX.g: Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map? (No Impact)

The project does not include the construction of housing; therefore, housing will not be constructed within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map. No *impact* will occur,

Questions IX.h and IX.i: Place within a 100-year flood hazard area structures that would impede or redirect flood flows? Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? (No Impact)

The proposed project does not include the construction of any buildings or structures that would impede or redirect flood flows or expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam and sea level rise. The project area is not in a 100-year floodplain (FEMA 2013c). *No impact* would occur.

Question IX.j: Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow? (No Impact)

Tsunamis are large sea waves generated primarily through large undersea seismic events, volcanoes, or similar significant natural events. The project area is on the tsunami inundation boundary line, as defined on the Tsunami Inundation Map for Emergency Planning, Oakland West Quadrangle; therefore, an identified tsunami hazard exists at the project site (Cal EMA 2009).

A seiche is an oscillation of a water body, such as a bay, that may cause local flooding. A seiche could occur on San Francisco Bay as a result of seismic or atmospheric activity. Even

though seiches are rare, it is possible for the project area to be struck by a seiche because of its location along the San Francisco Bay.

The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow that does not already exist, given the project location. *No impact* would occur

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. LAND USE AND LAND USE PLANNING				
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Setting

The proposed project would have significant land use impacts under CEQA if it were to physically divide an established community, conflict with any applicable land use plans or policies, or substantially affect the character of the vicinity.

Question X.a: Physically divide an established community? (No Impact)

The project involves temporary dredging of the lagoons. No permanent development would occur that could divide the established communities around the lagoons, and *no impact* would occur.

Question X.b: The proposed project would be consistent with applicable land use plans, policies, and regulations of an agency with jurisdiction over the project adopted for avoiding or mitigating an environmental effect. (No Impact)

The City of Alameda General Plan, Land Use Element, defines the land use classifications of the City of Alameda and the intended uses for each land use classification. The General Plan designation for land uses adjacent to the lagoons includes *Low-Density Residential, Medium Density Residential Community Commercial Public/Institutional/School*, and *Parks & Public Open Space*.

There are a variety of land uses around the lagoons, including Alameda Hospital and a small park between Oak Street and Otis Drive at the southern end of Lagoon 3. However, residential uses are the primary land use adjacent to the lagoons, and the lagoon environment is primarily an ancillary aesthetic and recreational use to the residential uses.

The Land Use element includes Guiding Policies for implementing the goals of the General Plan. For Residential Areas, Guiding Policy 2.4.a: "Maintain and enhance the residential environment of Alameda's neighborhoods" is applicable to the project. Since the project would address long-standing issues concerning the water quality of the lagoons, and would maintain and enhance the lagoon environments for the continued aesthetic and recreational enjoyment of the adjacent residential uses, the project would be in compliance with this policy, and *no impact* would occur.

The proposed project would enhance the lagoon environment by removing materials that are currently impairing the water quality of the lagoons and detracting from their recreational and aesthetic uses to the residential neighborhoods around them. Therefore, the proposed project would be consistent with this policy.

Article 1, Chapter 30-3 of the City of Alameda Municipal Code defines the zoning designations and uses in the City of Alameda. The zoning designations for properties located along the lagoon network include: *R-1- One-Family Residential, R-1-Y-F-5 – One-Family Residential, Special Yard District, R-4 – Neighborhood Residential, R-4-PD – Neighborhood Residential, Special Planned Development District, R-3-PD – Garden Residential, Special Planned Development District, R-6 – Hotel Residential, and A-P - Administrative Professional.*

The proposed project would not result in a change in land uses that would conflict with any of these zoning designations; therefore, *no impact* would occur.

Question X.c: Conflict with any applicable habitat conservation plan or natural community conservation plan? (No Impact)

The project site is not included in any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan. Therefore, implementation of the proposed project would result in *no impact* to habitat or natural community conservation plans.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES				
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Result in the loss of availability of locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Setting

Loss of the availability of a known mineral resource would occur if the proposed project activities were inconsistent with the land use classification for a specific area and would either directly or indirectly make the mineral resource inaccessible for extraction.

Question XI.a: Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. (No Impact)

The proposed project is located in lagoons owned by the City of Alameda and is surrounded by residential development. Based on a review of the City of Alameda's General Plan and associated maps, there are no known mineral deposits in the project area that would be of value to the region and the residents of the state. Therefore, *no impact* would occur.

Question XI.b: Would the project result in the loss of availability of locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. (No Impact)

Based on a review of the City of Alameda's General Plan and associated maps, there are no known mineral deposits in the project area. Therefore, *no impact* would occur.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. NOISE				
Would the Project:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Setting

Noise is defined as unwanted sound. Noise can disturb or annoy people, interfere with activities such as sleep or learning, or cause physical effects such as headaches and hearing loss. Sound is typically measured in decibels (dB). Because the human ear is not equally sensitive to all frequencies of sound, the A-weighted decibel (dBA) scale was developed to better approximate the human response to different sound levels. Noise attenuates as distance from the source increases. Noise attenuation is also influenced by other factors such as the presence of a barrier between the source and receptor. Typically, the human ear cannot perceive a difference in sound levels of less than 3 dB, an increase of 5 dB is the lowest readily apparent change in noise levels, and a 10 dB increase is perceived as twice as loud.

Groundborne vibrations are also considered in this section. Groundborne vibrations are produced by construction equipment and large vehicles traveling over roads. Groundborne vibrations can be a source of annoyance to people or, if amplitudes are high enough, can damage structures or disrupt sensitive scientific equipment. Like noise, vibrations attenuate with distance from the source. Groundborne vibrations attenuate at different rates in different media (water, soil) and soil types. Vibration magnitude is often measured using peak particle velocity (PPV), which is measured in inches per second (in/sec), with a larger value representing a vibration with more potential to cause damage.

The project site is in an urban area. The majority of properties bordering the lagoons are residences. The Alameda Hospital also borders the lagoon. Average ambient noise levels are likely typical of urban residential areas.

Regulatory Setting

The City of Alameda General Plan Health and Safety Element (City of Alameda 1991) addresses noise. General plan guiding and implementing policies related to noise and relevant to the proposed project are:

- Minimizing noise from vehicles, temporary activities such as construction, and stationary noise sources;

- Enforcing the city's noise ordinance; and
- Maintaining day and night truck routes that minimize the number of residents exposed to truck noise;

The General Plan defines significance criteria for determining a noise impact and provides a useful point of reference for this analysis. A noise impact would be adverse if the project would result in: (1) an increase in noise exposure of 4 dB or more and the resulting noise level would exceed the noise levels defined in the General Plan as acceptable for the affected land use; or (2) result in any increase of 6 dB or more.

The City of Alameda Municipal Code Section 4-10: Noise Control is the City's noise ordinance and provides regulations for noise within city limits. The ordinance contains the noise limits in Table 4.

TABLE 4: ALAMEDA MUNICIPAL CODE NOISE LIMITS

Minutes the noise limit can be exceeded in 1 hour	Noise limit (dBA) for residences, schools, hospitals, churches, and public libraries		Noise limit (dBA) for commercial properties	
	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
30	55	50	65	60
15	60	55	70	65
5	65	60	75	70
1	70	65	80	75
0	75	70	85	80

Source: Alameda Municipal Code Section 4-10.

The ordinance allows construction only from 7:00 a.m. to 7:00 p.m. Monday through Fridays and 8:00 a.m. to 5:00 p.m. on Saturdays, except in an emergency or where an exception has been granted by the City Manager. Construction that takes place during these hours is exempt from the noise limits in Table 4.

Question XII.a: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Less Than Significant)

Implementation of the proposed project would result in a temporary increase in noise levels near the project site. Project activities would generate noise from dredging equipment, loaders, and trucks used to transport dredged material. The noise levels generated by project activities would vary according to the specifications of each type of equipment and the number of pieces of equipment operating simultaneously. Approximate noise levels at 50 feet without mufflers or other noise-reducing measures for these types of equipment are: 60 to 80 dB dredging

equipment, 72 to 85 dB for loaders, and 83 to 93 dB for trucks (Columbia Association undated; EPA 1971).

Noise levels experienced at sensitive receptors, specifically residences and the Alameda Hospital, would vary according to distance from the noise source and conditions affecting noise transmission such as whether there is an unbroken line of sight between the source and the receptor. Buildings with an unbroken line of sight to the lagoons, adjacent to the staging and loading areas, and along truck routes would experience the greatest increase in noise levels. Buildings shielded by houses or vegetation or located farther from construction equipment and haul routes would experience lesser or no increase in noise levels. Specific locations would only be affected while equipment was working in that area, which would be a fraction of the total project duration.

Noise-generating activities would only occur Monday to Friday between approximately 7:00 a.m. and 3:00 p.m. If construction activities are necessary to occur outside these hours, a public hearing would be conducted and the City Manager would approve the extended hours prior to implementing extended hours. No noise-generating activities are anticipated during evenings, weekends, or holidays. Section 4-10.7 of the Alameda Noise Ordinance states that construction that occurs during these hours is exempt from the noise limits in Table 4. Therefore, project activities would conform to the specifications of the noise ordinance.

The City of Alameda will specify the following provisions that would minimize noise into its agreement with contractors.

- The contractor shall keep construction activities under surveillance and control to minimize damage to the environment by noise. The contractor shall use methods and devices to control noise emitted by equipment.
- All equipment shall have sound control devices no less effective than the original equipment and all motorized equipment shall have muffled exhaust.
- Noise generating construction equipment shall be shielded from occupied residences by noise-attenuating buffers.
- The contractor shall not use any machine, mechanism, device or contrivance at the Alameda Lagoons that produces a noise level exceeding 85 dBA, measured 50 feet from the source and when measured at a point of reception within the adjacent housing at the Alameda Lagoons does not exceed 55 dBA during the daytime. The "burst" noise level within the housing area shall not exceed 70 dBA.
- Construction activities shall be allowed Monday-Friday from 7:00 a.m. to 3:00 p.m.
- Construction activities and equipment operations within 300 feet of occupied residences shall only be performed from 8:00 a.m. to 3:00 p.m. on Monday through Saturday.

- No operation of equipment requiring backup alarms shall occur outside of 7:00 a.m. to 3:00 p.m.
- No work will occur on the following legal holidays: New Year's Day, Martin Luther King Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving (Thursday and Friday), and Christmas.

Because of the implementation of these noise-minimizing measures and the short duration of the impacts, noise impacts would be *less than significant*.

Question XII.b: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (Less Than Significant)

The operation of dredging equipment, loaders, and trucks would generate vibrations as well as noise. The anticipated strength of groundborne vibrations was analyzed to determine if they could spread through the ground and damage nearby structures. The thresholds at which groundborne vibrations generated by project activities could damage structures are: 0.3 PPV (in/sec) for older residential buildings and 0.5 PPV (in/sec) for newer residential structures and commercial buildings. The estimated vibration from project construction would not exceed 0.202 (Jones and Stokes 2004). These vibration levels would be distinctly perceptible by people in the area, but would not reach the threshold for disturbance (approximately 0.7 PPV [in/sec]) or the thresholds for structural damage. In addition, activities generating perceptible vibrations in each area of the project would be temporary. Therefore, impacts from groundborne vibration would be *less than significant*.

Question XII.c: A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (No Impact)

The duration of the proposed project is approximately 4 months. Once dredging is complete, all noise sources would be removed. The project would not permanently change ambient noise levels, so there would be *no impact*.

Question XII.d: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (Less Than Significant)

As discussed in the response to Question XII.a, the proposed project would result in temporary increases in noise levels near the project site from the use of dredging equipment, loaders, and trucks used to transport dredged material and along haul routes from truck traffic. However, noise impacts would be *less than significant* because of the short duration of the impacts and the fact that noise-generating activities would be limited to weekday daytime hours.

Question XII.e: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (No Impact)

The Oakland International Airport is southeast of the proposed project. The eastern portion of the proposed project is less than 1 mile from airport property, but according to the airport land

use plan, the proposed project is outside the Airport Influence Area (ESA 2012). The proposed project is also outside the noise contours for the airport's runways (Harris Miller Miller and Hanson 2011). For these reasons, there would be *no impact* related to public airports.

Question XII.f: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (No Impact)

The proposed project is not in the vicinity of a private airstrip, so there would be *no impact*.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING				
Would the Project:				
a) Include substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Question XII.a: The proposed project would not induce substantial population growth in an area, either directly or indirectly (No Impact)

Proposed project activities entail dredging materials and sediments from the City of Alameda's internal lagoon system that have been built up over time and have potentially affected the lagoon's water quality, stormwater detention, and wildlife habitats. The proposed project would require approximately 4-8 employees. Although this work force would directly increase the number of personnel in the lagoon area, it would not result in a short-term or long-term population increase in the region because these employees would be in the area temporarily (between June 2014 and August 2014) and would leave the region when the work is completed. Additionally, the proposed project does not require the extension of any infrastructure. Therefore, *no impact* related to direct or indirect population growth would occur in the project vicinity.

Question XIII.b: The proposed project would not displace substantial numbers of housing units necessitating the construction of replacement housing. (No Impact)

The proposed project would not displace any residents because the project is on an existing watery lagoon and would not involve any of the surrounding private properties. The proposed additional 4-8 employees at the project site would not result in a substantial demand for additional housing

units, necessitating the construction of new housing; therefore, the proposed project would have *no impact* on the displacement of housing requiring the construction replacement housing.

Question XIII.c: The proposed project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. (No Impact)

The existing use of the project site is primarily recreation. Residential properties surround the project site, but are not located in the project site, so the proposed project would not displace people, requiring construction of replacement housing elsewhere in the region. Therefore, the proposed project would have *no impact* on the displacement of people or necessitate the construction of replacement housing elsewhere in the area.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES				
Would the Project:				
a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services?	☐	☐	☐	☒

Question XIV.a: (No Impact)

The project would be carried out the City of Alameda Department of Public Works, in consultation and coordination with various city departments, including Police and Fire. The proposed truck route has been established through coordination with these agencies and would be used for hauling operations. The project would not impact local schools, parks, or other municipal services. *No impact* would occur.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION				
Would the Project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Setting

Recreation activities at the project site are limited and primarily exercised by residents whose private properties are located along the lagoons. Recreational activities include swimming and boating, such as kayaking, paddle-boating, canoeing, and similar non-motorized boating activities. Motorized water craft are not allowed, except for maintenance. The residential frontage is located mostly at rear-yard locations, and includes lagoon frontage, docks, patio decks, and associated waterfront amenities. Since the lagoons were created for private, residential recreation access, there is no direct public access to the water. Public viewing access is available at mid-block locations along Broadway, Willow Street, Otis Drive, and several other locations.

Question XV.a: The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (Less Than Significant)

The proposed project includes dredging, excavation, hauling, and disposal activities. During project activities, access to specified portions of certain lagoons would be temporarily closed to use. These closures may cause recreators to visit other parts of the lagoon system, resulting in a slight increase in recreational use density in these lagoon areas. Any realized increase in density in other parts of the lagoon system would be slight. Additionally, the remaining open lagoon system has the capacity to accommodate a slight increase in density. This increase in density would be temporary as lagoon closures would also be temporary, opening once activities cease.

The project would not generate additional residential development or new residents and it would therefore not increase the demand for neighborhood or recreational facilities. Additionally, it is unlikely that the temporary closure of specific lagoon areas would result in a large amount of recreators to visit nearby neighborhood and regional parks to a point that would substantially deteriorate a facility. The lagoon system is primarily used by private property owners. Displaced recreators are more likely to visit other parts of the lagoon system for boating or swimming and are not likely to engage in non-aquatic activities at regional parks in sufficient numbers to a point of deterioration. Therefore, the proposed project's impact on parks and recreation would be *less than significant*.

Question XV.b: The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (No Impact)

The proposed project would not create additional housing units and subsequent population in the area and would therefore not cause an increase in the use of existing recreational facilities to facilitate the construction or expansion of recreational facilities. Once all project activities are complete, the lagoon system would reopen bringing recreational uses and density to pre-construction conditions. Therefore *no impact* would occur.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION AND CIRCULATION				
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☒	☐	☐

Setting

Project dredging activities would occur within the lagoon network, while hauling and staging operations would require use of Alameda surface streets, including those within primarily residential areas. During the approximately 3-month dredging period, approximately 12,000

cubic yards of dredged materials would be transported by truck from the various staging areas to the disposal site at Alameda Point, IR Site 1. The hauling trucks proposed would carry an average of 16 cubic yards per load; this is the maximum legal capacity using California tandem trucks. Therefore, approximately 800 truckloads would be required for 12,000 cubic yards, resulting in approximately 1,600 total truck trips to and from the haul disposal site. This would result in an average of approximately 22-25 truck trips per day.

Trucks would deliver the material to a disposal site at Alameda Point by way of an established truck haul route. This truck route has been reviewed and approved by the city's Public Works and Police Departments and has been used for various projects in addition to the current project. The location of the route is intended to mitigate impacts to residential uses by relying on major thoroughfares in Alameda that already contain higher volumes of truck, bus, and other vehicular traffic. Trucks hauling the dredged materials to the disposal site would occur within business hours, and would be limited during school and business rush hours between 7:00 a.m. and 9:00 a.m. and after 3:00 p.m. to limit potential conflicts with school and business traffic.

The truck route is located on Central Avenue between Broadway and Webster Street, which is classified as a Regional Arterial in the City of Alameda General Plan Transportation Element. Following the intersection with Webster Street, Central Ave becomes Main Street, and this road is classified as an Island Arterial to its intersection with Navy Way accessing Alameda Point. Since the project will be staged at multiple locations along the lagoons, project access to the truck route will be required to access Island Arterial streets such as Grand Street and Island Collector streets such as Willow Street leading to and from the truck route.

Question XVI.a: Would the project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and nonmotorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? (Less Than Significant With Mitigation)

The City of Alameda General Plan Transportation Element includes goals and policies for vehicular, transit, bicycle and pedestrian modes in the city. One of the primary goals of the Transportation Element is to promote and utilize intermodal transportation options and connectivity.

The Transportation Element includes Policy 4.1.1.c which states: *Implement and maintain a Truck Route map coordinated with the private sector and neighborhood representatives.*

The truck route map has been established as the primary route for truck trips in Alameda. This route was identified after extensive consultation with the Department of Public Works with emergency service providers, and is identified in the Transportation Element. Additionally, the Modal Classifications discussion in the Transportation Element defines a Truck Route as:

The Truck Route Network is designed to maintain a limited number of streets on which through truck traffic is allowed. Truck traffic is allowed to use non-truck route streets when it is

necessary in order to reach their destination. Truck drivers must use the truck route for as much of their trip as possible. This network was created in order to give a useful network of streets that will not require excessive off-route driving.

The design and operation features of the truck route include sufficient radii at intersections and sufficient travel lane width to accommodate trucks.

The project would use this established truck route for hauling of dredged materials between the lagoons and the Alameda Point disposal site. The use of the truck route complies with the definition of the truck route in the Transportation Element, and is consistent with Policy 4.1.1.c.

A Transportation Systems Management/Transportation Demand Management (TSM/TDM) Plan was recently adopted by the City of Alameda. The goal of this plan is to provide strategies to reduce the use of single-occupant autos for work travel to and from the Alameda. The plan includes an analysis of potential TSM/TDM measures, and recommended TSM/TDM measures for new developments. Since the proposed project would be temporary in nature, and does not impact the mode or setting of work trips and related transit goals and objectives, *no impact* to this TSM/TDM plan would occur with implementation of the project.

Staging areas for project dredging activities would be set up in locations in residential neighborhoods that include designated bicycle routes identified in several bicycle planning documents, including the City of Alameda Bicycle Master Plan and the Alameda Countywide Bicycle Plan. Staging activities, including the parking of project vehicles, could temporarily intersect with designated bicycle routes, including Segments 3-S and 3-U in the Alameda Countywide Master Plan. Hauling operations could also result in the reduction of clearance on neighborhood streets, resulting in a potential loss of visibility for vehicles, bicyclists, and pedestrians. Additionally, hauling operations would result in a temporary increase in traffic along neighborhood streets between the project staging areas and the truck route during weekday business hours. However, implementation of *Mitigation Measure TRA-1: Construction Traffic Control Plan*, will ensure that any potential impacts would be *less than significant*.

Mitigation Measure TRA-1: Construction Traffic Control Plan.

The project contractor shall prepare and successful implement a construction traffic control plan that would include project-specific measures to reduce potential impacts on traffic flows on roadways affected by project construction. This plan will be reviewed and approved by the City of Alameda prior to commencement of project activities. These roadways will include, but not be limited to Willow Street, Grand Street, and Broadway. The plan shall include the following:

- Flaggers or signs will guide vehicle and other traffic (pedestrian and bicycles) through or around the construction zone. At all times, the contractor would maintain access for emergency response vehicles.

- Large truck and delivery trips shall be scheduled outside the peak morning and evening commute hours, and outside on-site peak traffic hours (for parking lot use).
- Along major arterials, truck trips will be scheduled outside the peak morning, peak evening, and event commute periods to the extent feasible.
- Construction, particularly related to lane closures, will be coordinated with local transit service providers.
- On-going and up-to-date information relating to the construction schedule and affected roadways and intersections, particularly lane closures, and a contact person, shall be provided to the public, for example on the City of Alameda website.
- Where it is feasible and safe to do so, existing pedestrian and bicycle access and circulation will be maintained at all times. If access and circulation cannot be maintained, detours would be designated and posted for pedestrians and bicyclists.
- All construction equipment and materials will be stored in designated contractor staging areas on or adjacent to the worksite, in a manner that minimizes obstruction of traffic.
- Public roadways will be repaired or restored to their original conditions upon completion of construction.
- The traffic control plan will conform to the *California Manual on Uniform Traffic Control Devices: Part 6*, "Temporary Traffic Control." Traffic plans may require approval from City emergency response providers.

Portions of the truck route along Main Street are designated as the Bay Trail. The Bay Trail is an approximately 400-mile loop that, when completed, will provide a continuous recreational trail around the entire perimeter of the San Francisco Bay linking all the shoreline communities together in the nine counties that comprise the Bay Area. The Bay Trail is used by both pedestrians and bicyclists. The Bay Trail is primarily grade separated from the road, so any impacts to pedestrians or bicyclists would be *less than significant*.

Question XVI.b: Would the project conflict with an applicable congestion management program, including LOS standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways? (Less Than Significant)

Portions of Central Avenue included in the Truck Route are classified as California State Route 61. This route is a component of the 2009 Alameda County Congestion Management Program Designated System. This system includes LOS standards for major intersection and corridor segments, and adverse impacts to this system result when growth induces traffic levels that exceed established system standards.

The project would result in a temporary increase in truck trips along Route 61. However, these trips would occur primarily during non-peak traffic hours and would be temporary, resulting in a *less than significant* impact on established congestion management standards.

Question XVI.c: Would the project result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks? (No Impact)

The project site is not within the vicinity of Oakland International Airport and would not result in a change in air traffic patterns, an increase in traffic levels, obstructions to flight, resulting in substantial safety risks. *No impact* would occur.

Question XVI.d: Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses? (Less Than Significant)

The Traffic Route for the hauling operations has been identified through coordination with City of Alameda Public Works and public safety and emergency responder departments and is identified in the Transportation Element of the General Plan. The route was chose, in part, based on the acceptable level of radii, visibility, and width necessary for truck trips. Through the increase in truck trips would be noticeable during the project operation, the features of the truck route would ensure than any potential increased hazards would be *less than significant*.

Question XVI.e: Would the project result in inadequate emergency access? (No Impact)

The project would occur within settings close to staging areas that would be accessible to emergency response providers. Additionally, major portions of the project would be carried within close proximity to Alameda Hospital, should emergency situations arise. *No impact* would occur.

Question XVI.f: Would the project conflict with adopted policies, plans, or programs regarding public transit or bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? (Less Than Significant)

Staging areas for project activities would be set up in locations that include designated bicycle routes identified in the City of Alameda Bicycle Master Plan. Staging activities, including parking project vehicles, could temporarily intersect with designated bicycle routes. However, the staging areas would be identified through markers as directed by the Public Works to ensure that oncoming bicycles and pedestrians are alerted to the temporary presence of project vehicles and equipment, and impacts would be *less than significant*.

Topics	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS Would the Project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Questions XVII. a – e: Impacts to water and wastewater utilities (No Impact)

The project is being undertaken by the City of Alameda Department of Public Works to address long-range sediment issues that are impact water quality. Public Works has responsibility for maintenance and operation of City of Alameda utilities and service systems. The project would not result in temporary or permanent increased flow or demand on the city's wastewater treatment provider, nor would it result in increased demand on the city's water utilities. The project would not result in the need for new or expanded wastewater or domestic water entitlements or facilities. *No impact* to these utilities would occur.

Questions XVII f – g: Impacts to landfills and solid waste (No Impact)

The dredged materials will be deposited at a City of Alameda-designated disposal site at Alameda Point, IR Site 1. The project will comply with all federal, state, and local statutes as directed by the DMMO program. *No impact* will occur.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

The proposed project would not degrade the quality of the environment. While the project could have significant impacts on cultural resources, geology and soils, hydrology and water quality, hazards and hazardous materials, and traffic and transportation, the City of Alameda will implement the mitigation measures identified in this Initial Study to reduce all potentially significant project-related impacts to a less than significant level. Therefore, the project's impacts would be less than significant, with mitigation incorporation.

Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

The project's impacts would not be cumulatively considerable. The project is a temporary dredging operation that would not result in operation activities in any of the resource areas analyzed in this Initial Study; therefore, any potential cumulative impacts would be less than significant. The project would have beneficial impacts to hydrology and water quality. Since the lagoon is connected to the San Francisco Bay, the improved water quality in the lagoons as a result of this project could result in a beneficial impact to the waters of the Bay and the marine environments that surround Alameda. Additionally, with incorporation of mitigation measures, any adverse impacts from the project would be less than significant.

Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

As identified and described in this Initial Study, the project would have potential impacts on cultural resources, geology and soils, hydrology and water quality, hazards and hazardous materials, and traffic and transportation that would be mitigated from potentially significant to less than significant. The project would have less than significant impacts on aesthetics, air quality and greenhouse gases, biological resources, noise, recreation, utilities and service systems, public services, The project would have no impact on population and housing, utilities and public services, agriculture and forest resources, and mineral and energy resources. As a result, the proposed project would have no environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

Note: Authority cited: Sections 21083, 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080, 21083.05, 21095, Pub. Resources Code; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

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LIST OF ACRONYMS

$\mu g/m^3$	micrograms per cubic meter
AIA	Airport Influence Area
ABAG	Association of Bay Area Governments
AWLHOA	Alameda West Lagoon Home Owners Association
BAAQMD	Bay Area Air Quality Management District
BAT	Best Available Technology
BCDC	San Francisco Bay Conservation and Development Commission
BCT	Best Conventional Technology
BMP	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal/EMA	California Emergency Management Agency
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
CARB	California Air Resources Board
CCR	California Code of Regulations
CDA	Community Development Agency
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide equivalents
COE	San Francisco District U.S. Army Corps of Engineers
CRHR	California Register of Historic Places
cy	Cubic Yard
dB	Decibel
dBA	A-weighted Decibel
DMMO	Dredged Material Management Office

DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
GHG	Greenhouse Gas
HASP	Health and Safety Plan
HWCL	Hazardous Waste Control Law
in/sec	Inches per Second
IPCC	Intergovernmental Panel on Climate Change
IR	Installation Restoration
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
$MMTCO_2e$	Million Metric Tons of $C0_2e$
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NO_x	Oxides of Nitrogen
NPDES	National Pollutant Elimination System
NRCS	Natural Resource Conservation Service
O_3	Ozone
OAK	Oakland International Airport
PAH	Polycyclic aromatic hydrocarbon
$PM_{2.5}$	Particulate Matter less than 2.5 microns in diameter
PM_{10}	Particulate Matter less than 10 microns in diameter
ppm	Parts Per Million
PPV	Peak Particle Velocity
PRC	Public Resources Code
RCRA	Resource Conservation and Recovery Act
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SFBAAB	San Francisco Bay Area Air Basin
SFBR	San Francisco Bay Region
SIP	State Implementation Plan
SLC	State Lands Commission

SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	Sulfur Dioxide
SO_x	Oxides of Sulfur
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TMDL	Total Maximum Daily Load
TSM/TDM	Transportation Systems Management/Transportation Demand Management
tpy	Tons per Year
USFWS	United States Fish and Wildlife Service
US	United States
USACE	United Sates Army Corps of Engineers
USC	United States Code
USGS	United States Geological Survey
VOC	Volatile Organic Compound

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