
**INITIAL STUDY
and
PROPOSED MITIGATED NEGATIVE DECLARATION
for
BANK STABILIZATION AND ACCESS IMPROVEMENTS
LAKE CHABOT REGIONAL PARK, ALAMEDA COUNTY, CALIFORNIA**



January 6, 2011

Lead Agency:
East Bay Regional Park District
P.O. Box 5381, Oakland, CA 94605
www.ebparks.org

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I.0 INTRODUCTION

I.1 INTRODUCTION AND REGULATORY GUIDANCE

The East Bay Regional Park District (EBRPD) has prepared construction documents to describe the proposed *Bank Stabilization and Access Improvements at Lake Chabot Regional Park, Alameda County, California*. The purpose of this Initial Study (IS) is to determine whether implementation of these park infrastructure improvements could result in potentially significant effects to the environment, and, if so, to incorporate mitigation measures to eliminate or reduce the project's potentially significant adverse effects to less than significant levels.

If, after consideration of this IS, and any comments received during the public review period, the District finds no substantial evidence that the proposed project would have a significant adverse effect on the environment, then a Mitigated Negative Declaration (MND) will be submitted for adoption by the EBRPD Board of Directors, as provided in the California Environmental Quality Act (CEQA), Section 21064.

I.2 LEAD AGENCY

The District is the CEQA Lead Agency and has prepared this Initial Study to provide agencies and the public with information about the proposed project's potential impacts on the local and regional environment. This document has been prepared in compliance with CEQA (1970) as amended and the State CEQA Guidelines, California Administrative Code, Title 14, Division 6, Chapter 3.

I.3 PURPOSE

The purpose of this document is to evaluate the potential environmental effects of the proposed *Bank Stabilization and Access Improvements at Lake Chabot Regional Park*. Mitigation measures have also been incorporated into the project to avoid any potentially significant impacts or reduce them to a less than significant level.

I.4 SUMMARY OF FINDINGS

Chapter 4 of this document contains the IS Checklist which identifies the potential environmental impacts by resource area and provides a brief discussion of each impact resulting from implementation of the proposed project. Based on the IS and supporting environmental analysis provided in this document, together with the incorporation of mitigation measures, the proposed project would eliminate or result in less than significant impacts for the following issues: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems.

In accordance with §15064(f) of the CEQA Guidelines, a MND shall be prepared if the proposed project would not have a significant effect on the environment after the inclusion of mitigation measures in the project. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after the incorporation of mitigation measures, the proposed project would have a significant effect on the environment. It is proposed that a MND be adopted in accordance with the CEQA Guidelines.

2.0 PROJECT DESCRIPTION

2.1 INTRODUCTION

Project Name: *Bank Stabilization and Access Improvements at Lake Chabot Regional Park, Alameda County, California*

Project Summary: The EBRPD is proposing to construct bank stabilization and dock and access improvements at an existing marina located wholly within Lake Chabot Regional Park in two phases. Activities involved in implementing the proposed project include:

- Removal and replacement of an existing asphalt path within the marina complex
- Removal and replacement of an existing boat launch ramp
- Installation of riprap and concrete block armor along the shoreline
- Installation of a new public dock with gangway for launching non-motorized boats
- Installation of a new fish planting pipe

The Initial Study for the proposed project has been prepared in conformance with specifications of CEQA, and the State CEQA Guidelines. Compliance with CEQA is required due to state and local jurisdiction over the proposed project.

EBRPD would assume the lead agency role under CEQA, with East Bay Municipal Water District (EBMUD) and California Department of Fish and Game (CDFG), acting as local and state responsible, interested, or trustee agencies.

2.2 PROJECT LOCATION

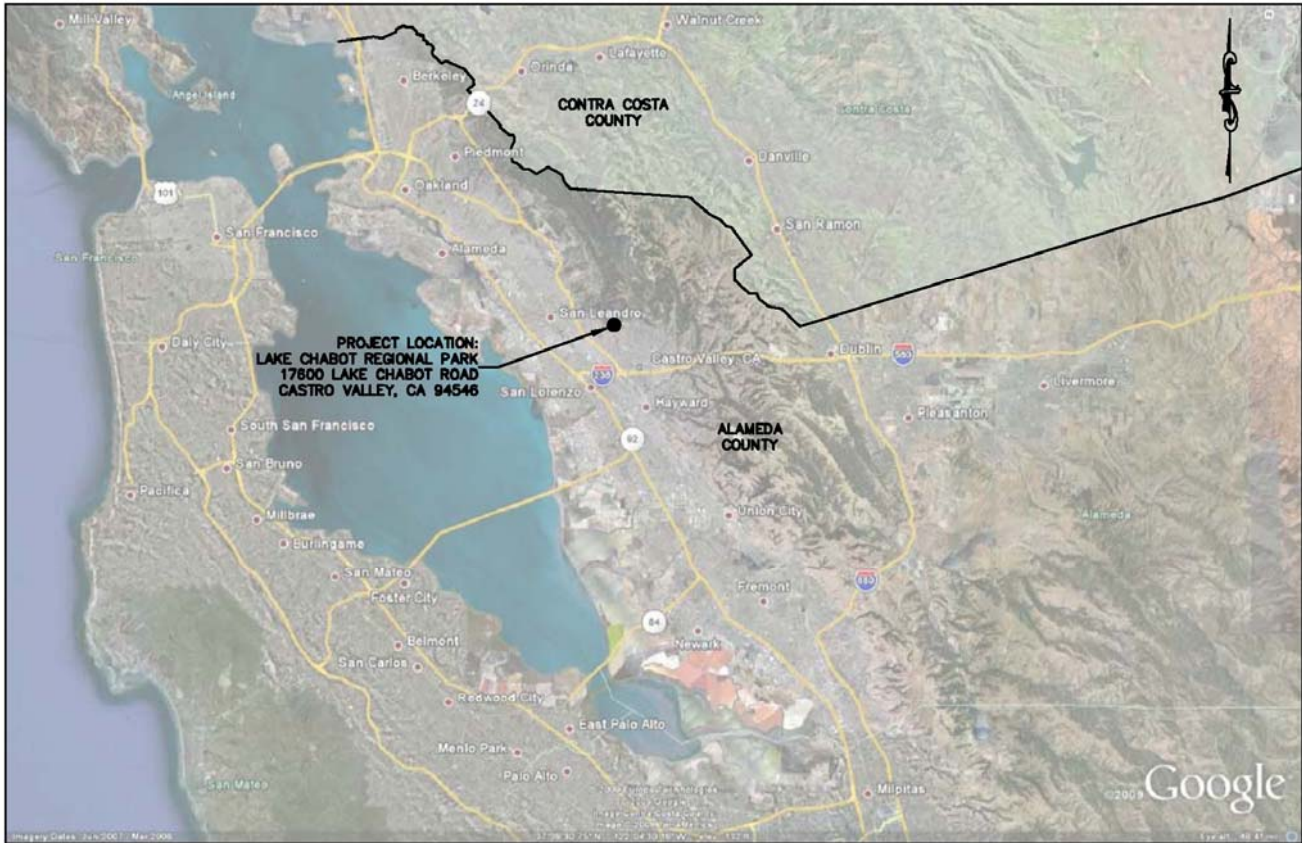
The three-quarter (.75) acre project site is contained wholly within the 350 acre Lake Chabot Regional Park. The Park is located in the Oakland/San Leandro Hills, east of Oakland and San Leandro and north of Castro Valley in Alameda County (USGS Hayward 7.5 Quad, Latitude 37° 43' 47" N, 122° 7' 18" W, Longitude -122.12167). The Park comprises 10 parcels: 084D-1400-001-00, 002-05, 002-06, 002-08, 002-17, 002-19, 002-25, 003-00, 004-00, 005-00. Construction would take place within APN 084D-1400-002-25 located at 17600 Lake Chabot Road, Castro Valley, CA 94546. (See *Figure 1 - Project Location*). Downtown Castro Valley can be reached by driving approximately two miles southeast on Lake Chabot Road. Interstate 580 Freeway can also be accessed by driving two miles west on Fairmont Drive. EBMUD owns the property in fee title and the EBRPD has a lease providing for the development, operation, and maintenance of the project site.

2.3 PROJECT PURPOSE AND GOALS

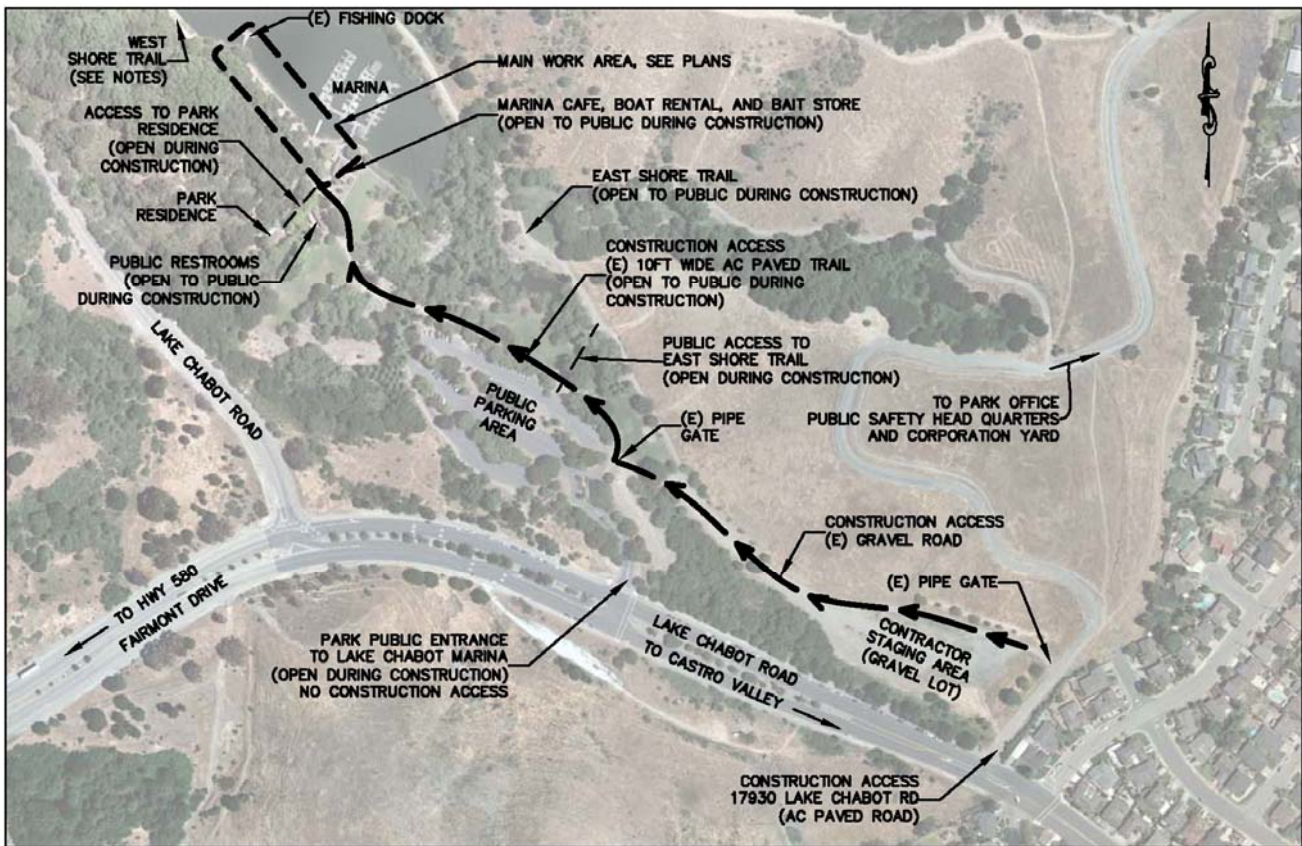
The purpose of the *Bank Stabilization and Access Improvements at Lake Chabot Regional Park* is to:

- Improve the public shoreline at the marina by: realigning an existing trail that provides access to an ADA accessible fishing dock; and armoring and refurbishing the marina beach area
- Enhance fishing and boating opportunities by improving: launching opportunities for small, non-motorized boats; and fish stocking operations
- Repair erosion and minimize potential slope instability by protecting the toe of the slope against wave action with the installation of 285-linear foot riprap buttress at the base of the western shoreline of the marina.

Figure 1 – Project Location



Vicinity Map



Site Map

2.4 PROJECT BACKGROUND AND ENVIRONMENTAL SETTING

Park History

Acquisition History. Public acquisition of what is now Lake Chabot Regional Park was initiated in 1875 when the Contra Costa Water Company (CCWC) began obtaining both watershed area and reservoir sites to serve the growing water needs of Oakland. Lake Chabot, a 315-acre reservoir, was constructed in 1874-75 to serve as one of the five terminal reservoirs of EBMUD's water distribution system. The lake has an estimated capacity of 4.1 billion gallons of water. The reservoir served as the mainstay of the East Bay's water supply for 40 years.

The EBMUD, which was created in 1923, acquired the entire holdings of the CCWC in 1928, including 40,000 acres of land in the East Bay Hills. These lands became part of the District Park system in 1952. Of the 4,587 acres that now comprise what has been divided into two regional parks (Anthony Chabot and Lake Chabot regional Parks), 3,409 acres are owned in fee by the EBRPD. The remaining 1,178 acres comprising the area around Lake Chabot (including the project site/marina complex) are leased by the EBRPD from the EBMUD.

Historic Park Use. While the parklands were acquired for use as a public park in 1952, the lake remained closed to recreation while the lake continued to serve as a primary source of drinking water for East Bay residents. The lake was opened to controlled recreational uses in the 1960s after legislation designated the lake as a standby emergency water supply. Body-contact water-sports are still not permitted due to the emergency water supply status of the lake.

Lake Chabot Regional Park Marina

Project Area. The three-quarter acre project site is located at the southern end of the lake within the 350-acre Lake Chabot Regional Park. Elevation at the lake is approximately 220 feet above sea level. The work area varies from 207 feet at the lake bottom to almost 240 feet above the existing upper trail.

The surface area of Lake Chabot Lake is approximately 315 acres with depths up to 60 feet. Lake surface elevations vary approximately 10 feet per year; the high levels occur in early spring and low levels in late summer (*Lake Chabot Land Use Plan, Final Environmental Impact Report* 1984). Lake surface elevations are dependent in part on annual rainfall and in part on EBMUD's release and impoundment schedules. These schedules are based on operational requirements and San Leandro Creek (located below the Lake Chabot Dam) fish habitat requirements. The spillway elevation is 227.3 above sea level.

Lake Shoreline. The site is located along the south-western shore of Lake Chabot northeast of the Marina Café. The beach area is exposed during the summer and during drought years most of the year. A gently sloping trail located downslope from the main trail leads from the café to a fishing pier. Toe erosion from lake wave action has undermined a 5-foot high embankment and wood retaining wall supporting this trail. As a temporary repair the EBRPD has set some rakers against the retaining wall foundation.

The project proposes to install a concrete abutment and 285-linear foot riprap buttress along the western shoreline within the marina complex to minimize potential slope instability caused by wave action. These improvements would reduce future surface erosion and siltation problems.

Vegetation. Twenty-four trees are located in the immediate project area. Tree species include live oak (*Quercus agrifolia*), and willow (*salix spp.*) among others. Shrub vegetation includes *Rubus ursinus* (California blackberry), but it is not extensive enough along the shoreline to stabilize the shoreline embankment.

Existing Facilities and Infrastructure. The Lake Chabot Marina serves as the gateway to Lake Chabot Regional Park which comprises 315 acres of lake and 35 acres of land. The marina facilities include: a small boat launch, fishing and observation piers, a marina with a capacity of approximately 70 boats, sightseeing

launch, trails and a marina bait shop and café. A security residence is located near the concession. Associated with the marina, but outside the project site, are family and group picnic facilities (including one ADA compliant site), restrooms, bicycle and pedestrian trails and parking areas.

Access. Bicycle and pedestrian access to the project area is from one of two existing trails (West Shore and East Shore Trails) that connect to the parking lot. At the site piers including one with access for the disabled provide access to the lake for fishing.

The Lake Chabot Marina entry is about two miles from Castro Valley. Motorized access to the park site is available from I-580 at Castro Valley and from San Leandro. From Castro Valley westbound drivers take the Strobridge Avenue exit then turn right on Strobridge, right on Castro Valley Boulevard, and left on Lake Chabot Road. Eastbound visitors exit at Redwood Road and go left at Castro Valley Boulevard, right at Lake Chabot Road and continue to the park entry. From I-580 in San Leandro, visitors exit at Fairmont Drive and go east (uphill) onto Lake Chabot Road and continue to the park entry.

Serving the marina complex/project site is paved parking for 168 vehicles including four handicapped and one 15 minute loading zones stalls. In addition, there are two overflow parking lots; one with 39 spaces and a larger one with 148 spaces. On street parking can accommodate approximately 250 cars. Parking reaches capacity routinely during peak season weekend days. The overflow parking would be used for project construction staging and would not be available for visitor use during construction.

Marina/Lake Recreation. Boating and fishing are the primary lake-related activities. Swimming is not permitted at the lake. Boat rentals include rowboats (electric motors), paddleboats and canoes. An electric sightseeing launch, the *Chabot Queen* offers seasonal tours of the lake. Gasoline powered boats are used by staff to support boating operations. Personal, non-motorized watercraft that pass the District quagga mussel (*Dreissena rostriformis bugensis*) inspection are allowed on the lake.

Most fishing takes place along the three mile long east and west shorelines, off the fishing docks, from personal watercraft and from boats that are available for rental. Lake Chabot is stocked with rainbow trout from September through May and catfish during the summer months. Fishing requires a current California Fishing License with stamps and an EBRPD Daily Fishing Access Permit for all anglers aged 16 and older. California Fish and Game regulations apply. Fishing licenses and EBRPD permits may be purchased at the Marina Cafe. No live fish may be used as bait. All other legal bait and lures are permitted. Fish may be cleaned only at the cleaning station along the walk near the parking lot. Catch-and-release angling is encouraged for bass, bluegill, and crappie. Release of badly hooked game fish and all non-game fish is not allowed. To protect spawning fish and to minimize interference with boaters moving in and out of the docks fishing is not allowed in the Chabot marina area.

The project would not alter current recreation use practices at the marina. It would: reconfigure and upgrade the trail to the existing fishing and observation deck to conform to Americans with Disabilities standards; enhance the beach by stabilizing the eroding embankment; and replace and enlarge the boat ramp and dock improving boat access to the lake. Refer to *Figure 2 - Bank Stabilization and Access Improvements* for the layout of the proposed improvements. The project site would be closed during construction.

Surrounding Recreational Uses. The surrounding areas of Lake Chabot Regional Park offer a number of activities including family and group camping, hiking, equestrian, bicycle and hiking trails, nature study, and picnicking.

Lake Chabot Regional Park forms part of an almost continuous open space corridor that extends the length of the Oakland-Berkeley Hills as it connects with Redwood, Sibley, Huckleberry, Tilden and Wildcat Regional District parks to the north. Together these parks serve a variety of wildland, watershed and recreation purposes,

while providing a visual open space backdrop from the adjacent urban communities. The East Bay Skyline National Recreation Trail traverses the park providing access to Redwood Regional Park and other parks to the north.

2.5 PROJECT DETAILS

The project details contained in this section of the project description address the recommendations and actions contained in the *Bank Stabilization and Access Improvements (09-22-10)* construction documents (referred to collectively as the “project”) that would result in physical changes to the baseline environmental conditions at this regional park and are incorporated by reference in this document.

Construction Period. Construction activities would occur between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday. Phase I (trail and bank stabilization) would commence in the late summer of 2011 and be completed in the fall of 2011 to take advantage of low lake water levels. Timing of Phase II (dock with gangway and associated abutments) would also be planned to take advantage of lake water levels below the ordinary high water line, though specific dates of installation would be dependent on obtaining funding.

Public Access & Public Outreach/Notification. Public access to the west trail (also see below) would be closed duration of each phase of the project. Concurrent with the construction work, the District would develop and implement an outreach program. This public outreach component would include: posting informational signs regarding work under progress and press releases.

Construction Access and Staging. As there is very limited space within the construction area most of the storage and staging activities would be located in the overflow parking area located approximately one-third mile away from the construction site. Construction access would be through a secondary entry located off Lake Chabot Road avoiding the primary public park entrance. There would be shared access along the trail just north of the parking lot where park users would need to cross this trail to reach the east shore.

Construction of Project Components. The project would require the use of heavy trail building equipment such as graders, excavators and compactors, as well as a barge-mounted pile driver. Trucks would be required to haul trail building materials to complete the following tasks:

- Demolition and removal of asphalt, concrete and wood to an off-site, approved recycling facility in compliance with the county ordinance for construction debris recycling
- Clearing and grubbing the surface area to be improved
- Grading and filling the surface area to be improved
- Paving the surface area with asphalt or concrete
- Completing tie backs into embankment, where needed
- Installing riprap and possibly some articulated interlocking concrete blocks, for protection of the western shoreline of the marina, to reduce surface erosion and siltation problems
- Installing the new floating dock with gangway
- Installing the new fish planting pipe

Anticipated Construction Materials. Materials included in the construction of the proposed project would include:

- Asphalt and concrete paving
- Select imported fill materials
- Crushed rock and gravels
- Wood and concrete decking and railing
- Bank stabilization materials including 75lbs+/- 8” dia. rock and concrete interlocking erosion control block
- General landscape materials such as trees, shrubs

Construction debris off-hauling and the delivery of materials would account for most of the truck trips. Construction would involve approximately 185 vehicle trips to handle deliveries and waste removal (assuming 10 cubic yards or 20 tons per truck trip) and to bring pilings and dock materials. Construction details for the various elements of the project are outlined below.

Earthwork. Earthwork construction at the site would cover approximately 7,550 square feet. It would include the excavation of existing asphalt and concrete and stripping the site of the existing near-surface soil. Preparation for placing the riprap armor would also involve extracting a keyway at the toe of the slope, excavating benches at the stripped surfaces to the desired grade, and placing riprap to bring the site to finish grade. A total grading volume of 1,450 cubic yards is estimated to complete the proposed improvements.

Trail and Ramp Replacement. The improvements would be accomplished by the use of small tractors that would excavate the existing asphalt and concrete trail and concrete ramp. Fill material (engineered fill and/or aggregate base) would be hauled in by dump trucks to build the trail bed. The next step would include the compaction of material before the final finished surface is installed. The trail construction would be completed with the installation of wood and metal railings, and signage. No additional park furnishings, water fountains or trash/recycling receptacles would be installed.

Riprap Placement. Riprap would provide toe and scour protection at the base of the shoreline embankment. The currently envisioned riprap acreage is around 5,000 square feet. Figure 2- *Proposed Project Improvements*, identifies the location of the riprap. Riprap would be installed during a low water stage near the base of the slope. The land at the water's edge would be excavated and graded by tractors with blades allowing for keying the riprap into the slope using either a dumping method or an excavator equipped with appropriate bucket ideally leading to no excess soil being hauled away. Neither method would require heavy equipment within the water. The riprap would be approximately two feet thick and would likely to extend about ten feet down the slope. Approximately 250 cubic yards of riprap would be needed. To protect the shoreline the top of riprap would be at an elevation of 229 which is at least one foot higher than the maximum expected water level. The toe of the riprap will be excavated approximately two feet deep into the lake bottom. The riprap covers a fair amount of elevation difference in order to protect the shoreline at all water levels.

Floating Dock Installation. The installation of the floating dock would require driving piles into bedrock at both ends of the 10 foot by 80 foot floating dock and along the gangway that hinges from the shore at one end and is supported by the floating dock. The shaded area of the proposed dock would be 1,200 square feet. This includes 800 square feet for the float and 400 square feet for the gangway. A concrete abutment would be installed at the top of bank (elevation 229). The existing wood floating dock with a shaded area of 96 square feet would be removed from the marina and disposed of in the manner described below. The resulting net added shaded area for all of the improvements would be 740 square feet.

Stockpiling of Construction Materials and Disposal of Waste Materials. Stockpiling of construction materials including portable equipment, vehicles, supplies, and chemicals would be confined to a fenced half-acre construction staging area that would be located in the overflow parking area approximately one-third mile away from the project site as shown in Figure -1 *Project Location* on the Site Map. Best management practices (BMPs) would be required to be deployed by the contractor to prevent unwanted run-off and dust related problems.

Waste materials generated as part of the construction activities would consist primarily of demolition, excavation, and grubbing related waste. Demolition waste would include broken asphalt and concrete, wood debris, small amounts of scrap steel and plastics. In addition, there would be vegetation waste associated with clearing and grubbing and tree removal as part of the site preparation.

Demolition and grubbing related wastes would account for approximately 1,450 cubic yards of materials. These materials would either be loaded directly onto dump trucks for off-site disposal or temporarily stockpiled in one of the designated stockpiling areas for later disposal.

2.6 REGULATORY SETTING

Required Actions. The East Bay Regional Park District proposes to:

1. Adopt the Mitigated Negative Declaration and Mitigation Monitoring Plan; and
2. Approve the plans and specifications for the *Bank Stabilization and Access Improvements at Lake Chabot Regional Park, California*

Approvals, and Permits. The following responsible and trustee agencies have jurisdiction over some or all of the proposed project components:

- US Army Corps of Engineers (USACE) - all work below the spillway elevation of 227.3
- Regional Water Quality Control Board (RWQCB)
- The East Bay Municipal Utility District (EBMUD)
- Alameda County Department of Public Works

Permits and/or approvals required from the following state and federal agencies include:

- State Department of Fish and Game 1600 Streambed Alteration Agreement
- US Army Corps of Engineers Section 404 (discharge, dredge, or fill)
- Regional Water Quality Control Board 401

2.7 PROJECT REVIEW AND APPROVAL

In accordance with Section 15073 of the CEQA Guidelines, this Initial Study and Mitigated Negative Declaration are being distributed for review by local, state and federal agencies with jurisdiction over the project site. A notice of availability of the IS/MND has been sent to nearby property owners and other interested parties. The document is available for review at the following locations:

East Bay Regional Park District
Planning, Stewardship and GIS Services
P.O. Box 5381
2950 Peralta Oaks Court
Oakland, CA 94605
Web site: www.ebparcs.org
Phone: (510) 544-2323
Fax: (510) 635-3478
Email: jbondurant@ebparcs.org

Alameda County Library – Castro Valley Branch
3600 Norbridge Avenue
Castro Valley, CA 94546
Phone: (510) 667-7900

A Public Hearing on the project is tentatively scheduled to be held at the regular District board meeting on Tuesday, February 15, 2011 at 2:00 p.m. at the EBRPD headquarters 2950 Peralta Oaks Court in Oakland.

Written comments on the IS/MND should be submitted in writing to EBRPD prior to the conclusion of the 30-day public comment period (**no later than 5:00 p.m., February 10, 2011**). Comments should be mailed, emailed or faxed to the Planning, Stewardship and GIS Services Department, attention: Julie Bondurant, Lake Chabot IS/MND at the above address, email or fax number.

In reviewing the IS/MND, affected public agencies, organizations and interested citizens should focus on the sufficiency of the document in identifying and analyzing any potential impacts to the environment, and the proposed ways in which any significant effects of the project are to be avoided or reduced.

The District will review and evaluate written comments received during the public review period, and determine whether any substantial new environmental issues have been raised. If there are substantial new environmental issues, not covered in the IS/MND, further documentation, such as an Environmental Impact Report or an expanded IS/MND, may be required. If not, the EBRPD Board of Directors will adopt the Mitigated Negative Declaration and approve the project. The District will then file a Notice of Determination with the Alameda County Clerk's Office within five days following project approval.

3.0 SUMMARY OF PROJECT MITIGATIONS

AIR QUALITY

MITIGATION AIR-1: To minimize dust the contractor shall be required to employ the following Best Management Practices for managing dust:

- Regularly water access routes and construction areas associated with tree removal and trail work using a water source which would either be self-propelled or attached to a vehicle
- Excavating during calm periods
- Covering all truck beds hauling soil, vegetation and other loose construction materials
- Reestablishing bare soils with vegetation
- Routinely covering stockpiled materials
- Maintaining all equipment engines in good condition, in proper tune (per manufacturer's specifications), and in compliance with all State and Federal requirements.

BIOLOGICAL RESOURCES

MITIGATION BIO-1: A wildlife biologist shall perform pre-project biological surveys for Alameda whipsnake (*Masticophis lateralis euryxanthus*) prior to the start of construction. Should Alameda whipsnake be found within the project during the pre-construction surveys or during construction activities an exclusion fence shall be installed under the direction of a District biologist along the perimeter of the work area to prevent whipsnakes and other terrestrial species from entering the project construction zone. In addition, a crew training program shall be provided to on-site workers to identify the Alameda whipsnake along with on-site monitoring during construction activities involving grading, and tree removal.

BIO-2 In-water construction work associated with the placement of the abutments, piers, and riprap shall be limited to August 1 to October 31 to protect the aquatic habitat and native and planted aquatic populations at Lake Chabot.

Mitigation Measure BIO-3. The District shall communicate and enforce the following Best Management Practices (BMP) to the construction contractor to avoid damage to the trees scheduled for protection. All trees designated for protection shall be clearly marked by the District Representative and these trees shall be identified in the field at a pre-construction meeting with the Contractor. At this meeting the contractor shall be directed to:

- Install protective fencing to demarcate the drip line of protected trees
- Avoid trenching, grading, or paving into the drip line area
- Not change, by more than two feet, grade elevations within 30 feet of the drip line area
- Not park or operate any motor vehicle within the drip line area
- Not place or store any equipment or construction materials within the drip line area
- Not attach any signs, ropes, cables, or any other items to any tree
- Not to place or allow to flow into or over the drip line area of any protected tree any oil, fuel, concrete mix, or other deleterious substance.

Pruning shall be minimized to the greatest extent feasible. Where pruning is required for equipment access and to facilitate construction activities it shall be performed under the direction of the District Project Manager.

Mitigation Measure BIO-4. The proposed project shall include the planting of approximately two new oak trees to replace each oak tree that would be removed to complete the project improvements. New oak trees shall be planted in woodland areas within the park at a location to be determined by the District.

CULTURAL RESOURCES

MITIGATION CULT-1: A District representative shall monitor ground-disturbing activities to ensure there are no impacts to prehistoric or historic resources, and comply with District Cultural Resources Policy (EBRPD Board Resolution 1989-4-124) if resources are encountered.

MITIGATION CULT-2: In the event that prehistoric, archaeological or paleontological artifacts or remains are encountered during project construction, all ground disturbing activities shall be halted within a minimum of 50 feet and artifacts shall be protected in place (in accordance with EBRPD Board Resolution No. 1989-4-124 and State and federal law) until the find is evaluated by an archaeologist or , trained cultural resource professional, and appropriate mitigation, such as curation, preservation in place, etc., if necessary, is implemented.

MITIGATION CULT-3: In the event of accidental discovery of human remains, the County Coroner shall be notified, and, if the remains are determined to be of Native American origin, the Native American Heritage Commission (NAHC) would be notified to identify the Most Likely Descendant (MLD), in accordance with State and federal law. The disposition of the remains shall be coordinated between EBRPD, the County Coroner, NAHC, MLD and the archaeological consultant.

GEOLOGY AND SOILS

MITIGATION GEO-1: The contractor shall be required to implement appropriate Best Management Practices for minimizing potential erosion and sedimentation within the upland project area. These measures include, as appropriate to the site conditions: conducting activities during the dry season (July 1-November 30); using dikes, basins, ditches, straw, erosion control fabric and other temporary measures (e.g., water bars, fiber rolls); and installing catchments for source pollutants while in-water work within jurisdictional waters shall be limited to August 1-October 31.

MITIGATION GEO-2: The contractor shall exercise a due standard of care and judgment to protect the integrity of the project site and shall stop work when adverse weather or anticipated rainfall has made or would make construction work inadvisable. In any event, rain in the amount of one inch or more in a seventy-two hour period shall result in a postponement of construction activities.

HAZARDS & HAZARDOUS MATERIALS

MITIGATION HAZ-1: The transport, storage and use of potentially hazardous materials shall conform to the following provisions:

- All equipment shall be inspected for leaks immediately prior to the start of project activities, and regularly inspected henceforth until equipment is removed from the premises.
- The contractor(s) shall prepare an emergency spill response plan prior to the start of the project and maintain a spill kit on-site throughout the duration of the proposed project. In the event of a spill or release of any chemicals during activities associated with the proposed project, on or adjacent to park property, the contractor shall immediately notify the appropriate District Representative (e.g., project manager or supervisor). Emergency containment procedures shall be initiated immediately to prevent contamination.
- Hazardous materials required for construction shall be contained within vessels engineered for safe storage. Large quantities of such materials shall not be stored on-site.
- Equipment shall be refueled, cleaned and repaired outside park boundaries, or within a contained area on site away from open waters, except during emergency situations. All contaminated water, spill residue, or other hazardous compounds shall be disposed of outside park boundaries at an authorized location.

MITIGATION HAZ-2: A safety plan shall be developed by the contractor and reviewed by all District project staff prior to the start of any work, including the following measures to reduce fire hazards:

- Spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers shall be required for all heavy equipment.
- Work crews shall be required to park vehicles away from flammable vegetation, such as dry grass and brush. At the end of each workday, heavy equipment shall be parked over mineral soil, asphalt, or concrete at a location agreed upon by the Contractor and District Representative prior to project commencement.
- Park staff shall be required to have a District radio on-site, which would allow for direct contact to Calfire and the centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire. Fire suppression equipment (i.e., fire extinguishers) shall also be available at the project site.

HYDROLOGY & WATER QUALITY

MITIGATION HYDRO-1: The Contractor shall comply with the Best Management Practices (BMPs) in the 2009 Construction BMP Handbook / Portal by the California Stormwater Association (CASQA) [www.CASQA.org] in each of the work areas including construction staging areas, prior to and immediately after grubbing and clearing including but not limited the installation of silt fencing and fiber rolls. Erosion control measures shall remain in place, and be maintained until removed at the direction of the District inspector. Exposed work areas shall be hydroseeded and mulched at the close of construction at the locations shown on the construction plans.

NOISE

MITIGATION NOISE -1: Hours of work shall be Monday through Friday, 7 a.m. to 7 p.m. Requests to work off-hours, on weekends and District holidays shall be at the discretion of the District's Representative.

MITIGATION NOISE -2: Internal combustion engines used on the project site shall be equipped with a muffler type recommended by the manufacturer. Equipment and trucks shall utilize the best available noise-control techniques (e.g., engine enclosures, shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.

PUBLIC SERVICES

MITIGATION SERV-1: District shall post warning signs to stay clear of work area during periods of construction. Contractor shall install temporary construction fencing around the work areas prior to each phase of construction and retain fencing until each phase of work is completed. Contractor shall comply with the fire safety requirements set forth in the Supplementary Conditions for the project.

RECREATION

MITIGATION REC-1: The District shall develop a noticing and outreach component to inform the public about scheduled closures. Noticing and outreach shall include the following components:

- The District shall post notices at key access points in Lake Chabot Regional Park that detail the proposed project's construction schedule, including a map of the project site, and the timing and duration of planned closures
- The District shall post a large visible sign in proximity to the project site warning the public of ongoing construction activities and disruption of recreational access to the marina
- The reservation staff shall be informed of the project and briefed as to potential construction related disruptions (e.g., added noise and dust in a normally tranquil setting, occasional traffic disruptions, potential reduction in available parking as part of the parking area would be occupied by contractor employees)
- The District shall provide notice of the project on its website.

UTILITIES AND SERVICE SYSTEMS

MITIGATION UTL-1: All broken asphalt and concrete, wood debris, small amounts of scrap steel, plastics and vegetation waste associated with clearing and grubbing and tree removal shall be removed and disposed of offsite by the contractor in a legal manner at a site approved by the District. The contractor shall be responsible for making all arrangements for the disposal of such materials in a manner that shall comply with federal, state, and local statutes and regulations pertaining to solid and green waste.

MITIGATION UTL-1: All cut trees and associated slash and woody debris (>1.5" diameter or 3' length), soil and debris shall be removed and disposed of offsite by the contractor in a legal manner at a site approved by the District. The contractor shall be responsible for making all arrangements for the disposal of such materials in a manner that shall comply with federal, state, and local statutes and regulations pertaining to solid waste and Sudden Oak Death (SOD) and Light Brown Apple Moth (LBAM) quarantine compliance agreements.

4.0 INITIAL STUDY CHECKLIST

PROJECT INFORMATION	
1. Project Title:	Bank Stabilization and Access Improvements at Lake Chabot Regional Park, Alameda County California
2. Lead Agency Name & Address:	East Bay Regional Park District, 2950 Peralta Oaks Ct., P.O. Box 5381, Oakland, CA 94605-0381
3. Contact Person & Phone Number:	Julie Bondurant, (510) 544-2323
4. Project Location:	17600 Lake Chabot Road, Castro Valley, CA 94546, Alameda County
5. Project Sponsor Name & Address:	East Bay Regional Park District, 2950 Peralta Oaks Ct., P.O. Box 5381, Oakland, CA 94605-0381
6. Plan Designation:	Lake Chabot Regional Park
7. Zoning:	Recreation and Resource Management Uses
8. Description of Project:	The focus of the <i>Bank Stabilization and Access Improvements at Lake Chabot Regional Park, California</i> is to stabilize the shoreline, remove barriers to access, improve public marina safety and security, improve fishing opportunities, and extend habitat along the shore
9. Surrounding Land Uses & Setting:	Refer to <i>Section 2.4 - Background and Setting and Section 4.10 of the Checklist - Land Use Planning</i>)
10. Approval Required from Other Public Agencies:	Refer to <i>Section 2.6 Regulatory Setting</i>

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture & Forest Resources	<input checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input checked="" type="checkbox"/>	Geology/Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards & Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology/Water Quality
<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources	<input checked="" type="checkbox"/>	Noise
<input type="checkbox"/>	Population/Housing	<input checked="" type="checkbox"/>	Public Services	<input checked="" type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation/Traffic	<input checked="" type="checkbox"/>	Utilities/Service Systems	<input checked="" type="checkbox"/>	Mandatory Findings of Significance

DETERMINATION

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	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.
<input type="checkbox"/>	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.

Prepared by: Julie Bondurant, Senior Park Planner

Signature

Date

Approved by: Brian Wiese, Chief, Planning, Stewardship and GIS Services Department

Signature

Date

4.1 AESTHETICS

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

a, c) Have a substantial adverse effect on a scenic vista; or c) substantially degrade the existing visual character or quality of the site and its surroundings? The project site is located along the Lake Chabot shoreline within a marina complex. This small, relatively enclosed section of the lake offers the park visitor limited views of the larger lake and park beyond to the north.

Project activities focus on replacement of dilapidated park trails, boat ramp and floating dock with gangway, placement of riprap armor on approximately 285 linear feet of lake shoreline, and installation of a new fish planting pipe (Refer to *Figure 2 - Bank Stabilization and Access Improvements* and *Figure 3 - Views of the Project Site*). The new dock would extend further out into the lake than the existing dock. Realignment of the dilapidated park trail to conform to current Americans with Disabilities Act (ADA) standards would require removal of 18 trees (9 trees 6" or less in diameter at breast height [DBH] and 9 trees greater than 6" and less than 24" DBH) located adjacent to existing pathway. None of these proposed improvements would alter the character of the site as a marina, diminish the character of the marina, nor substantially alter any views into or away from the shoreline. Repair of the failing retaining wall and replacement of the substandard dock and trail would enhance the visual quality of the marina and provide visitors with physical disabilities with improved opportunities to access the shoreline facilities.

Potential Impact: No Adverse Impact
Mitigation: None required

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? The project site is not located within the vicinity of a designated State scenic highway and no views from a scenic highway would be directed toward the site. Nor would the project site provide views looking out toward a state scenic highway. Therefore, the project would not have an impact on scenic resources located within a State scenic highway.

Potential Impact: No Impact
Mitigation: None required

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? Project improvements would not introduce new sources of light or materials that would

induce glare. Construction materials would include a combination of concrete (boat ramp), asphalt (trail), rock, wood (railings) and brushed aluminum (floating docks) similar to materials currently employed in the marina. No night lighting would be introduced and construction would occur only during daylight hours so no night lighting is anticipated over the short term either. Therefore, no long- or short- term lighting or glare impacts would occur as a result of the project.

Potential Impact: No Impact

Mitigation: None required

Figure 3 - Views of the Project Site



Marina trail access, floating dock & observation deck looking north



View from shoreline trail looking south



Floating dock at low water elevation & eroding bank undermining trail



Boat storage looking east from project site shoreline



Fish pipe

4.2 AGRICULTURE RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AGRICULTURE RESOURCES In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a, e) 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; or 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? The project site is not located on Prime Farmland, Unique Farmland or Farmland of Statewide Importance. Nor is it under a Williamson Act contract (*Alameda County Important Farmland, 2008 FTP directory /pub/dlrp/FMMP/pdf* at ftp.consrv.ca.gov Accessed October 25, 2010). The marina complex where the project would occur is located within a regional park designated as natural open space. No agricultural activities occur at the marina or along the access roads or trails. The proposed project would not conflict with existing agricultural zoning nor facilitate conversion of agricultural land in areas adjacent to the project site to a non-agricultural use.

Potential Impact: No Impact

Mitigation: None required

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? Neither Lake Chabot Regional Park, nor any of the lands adjacent to the park are zoned for agricultural use; therefore, implementation of the Plan would not conflict with existing zoning for agricultural uses or Williamson Act contracts.

Potential Impact: No Impact

Mitigation: None required

c, d) c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526); or d) result in the loss of forest land or conversion of forest land to non-forest use? The project site is zoned regional park/open space, which permits development of public recreation facilities, such as the existing marina that comprises the entirety of the project site. Use of the park, and more specifically the project site, for agricultural - forest resource production is not consistent with the long range purpose of the site as a marina complex. The adjacent woodland areas within this regional park provide biodiversity, water quality, recreation and other public benefits.

Land comprising Lake Chabot Regional Park has been set aside as protected open space since 1923 and designated as public parkland since 1952. As a long standing marina facility, the project site is not zoned as forest land or timberland for timber production as defined by the California Public Resources Code (PRC Section 12220[g]) as “...*land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits...*” Nor would the proposed project improvements conflict with existing lands zoned as forest land or timberland.

While the proposed project improvements would result in the removal of 18 singular trees along the shoreline there would be no net loss of forest resources.

Potential Impact: No Impact

Mitigation: None required

4.3 AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a b, c 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; or c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? The analysis in this section is based on a review of existing air quality conditions in the region and air quality regulations administered by the U.S. Environmental Protection Agency (“EPA”), the California Air Resources Board (CARB), and the Bay Area Air Quality Management District (“BAAQMD”). This analysis includes methodologies identified in both the existing (1999) and updated *CEQA Air Quality Guidelines* adopted by BAAQMD on June 2, 2010.

The study area for the proposed project is within the jurisdiction of San Francisco Bay Area Quality Management District (BAAQMD). On June 2, 2010, the BAAQMD’s Board of Directors unanimously adopted the proposed CEQA thresholds of significance. The San Francisco BAAQMD is currently designated as a nonattainment area for state and national ozone standards and national particulate matter ambient air quality standards. (BAAQMD CEQA Guidelines June 2010). The BAAQMD Table 4-1 below excerpted from the BAAQMD CEQA Guidelines (June 2010) presents the *Thresholds of Significance* for construction-related criteria air pollutant and precursor emissions.

Based on these thresholds an increase of nitrogen oxides (NOx) above 54 lbs/day for short-term effects (construction) would result in a significant impact. An increase of NOx or reactive organic gases (ROG), above 54 lbs/day for long-term effects (operation) would result in a significant impact. For PM10, the construction-related impact of a project would be significant if it would emit pollutants at a level equal to or greater than the 82 lbs/day during periods of peak construction, while the threshold for PM10 would be 54 lbs/day. Examples of

the level of construction activity that could exceed threshold as shown in *Table 4-1: Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors* would include:

- Construction site with minimal earthmoving exceeding 8.1 acres per day.
- Construction site with earthmoving (grading, excavation) exceeding 2.2 acres per day

(Source: *Bay Area Air Quality Management District CEQA Guidelines* June 2010).

Table 4-1 - Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors

Pollutant/Precursor	Daily Average Emissions (lb/day)
ROG	54
NO _x	54
PM ₁₀	82*
PM _{2.5}	54*

* Applies to construction exhaust emissions only.
 Notes: CO = carbon monoxide; lb/day = pounds per day; NO_x = oxides of nitrogen; PM_{2.5} = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM₁₀ = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; SO₂ = sulfur dioxide.

The construction phase of the project would include operation and periodic idling of heavy equipment, temporarily generating dust and equipment exhaust emissions. However, the daily average emissions are not anticipated to reach or exceed the air pollutants or precursors levels identified in *Threshold of Significance* listed in Table 4.1 above as the total graded area would not exceed three-quarters of an acre and the total quantity of earth moved (disturbed area) would not exceed two acres. Nor would the activities from the proposed project improvements result in a net increase in emissions over the long term. Implementation of Mitigation **AIR-1** would reduce minor impacts associated with the release of dust and loss of loose debris off-site of project area to a Less than Significant Level.

Potential Impact: Less than Significant with Mitigation Incorporated

Mitigation: See **AIR-1**

MITIGATION AIR-1: To minimize dust the contractor shall be required to employ the following Best Management Practices for managing dust:

- Regularly water access routes and construction areas associated with tree removal and trail work using a water source which would either be self-propelled or attached to a vehicle
- Excavating during calm periods
- Covering all truck beds hauling soil, vegetation and other loose construction materials
- Reestablishing bare soils with vegetation
- Routinely covering stockpiled materials
- Maintaining all equipment engines in good condition, in proper tune (per manufacturer’s specifications), and in compliance with all State and Federal requirements.

d) Expose sensitive receptors to substantial pollutant concentrations? Sensitive receptors within the project area include recreational users including hikers, dog walkers and their dogs, equestrians, bicyclists, and people fishing in boats, along the shoreline or off the docks, as well as picnickers, and common and rare wildlife, including threatened and endangered species (see Section 3.4 *Biological Resources*). Heavy equipment required to demolish, remove, and install paving materials, abutments and riprap to armor the shoreline during the construction phase of the project would generate dust and equipment exhaust emissions. However, the project is located wholly within a regional park and residents live more than 1,000 feet from the park boundary thus minimizing any potential exposure to residents. Park visitors would be protected from emissions pollutant concentrations through intermittent closures for those areas of the park that would potentially be adversely impacted by the construction activities. Late summer-fall pre-construction biotic surveys would ensure that there are no wildlife nesting sites in the construction area. With these standard construction measures the project would not subject sensitive receptors to substantial pollutant concentrations during construction. Nor

would the project result in any activities that would result in the generation of substantial pollutant concentrations in the long term.

Potential Impact: Less than Significant

Mitigation: None required

e) **Create objectionable odors affecting a substantial number of people?** The *Thresholds of Significance* for odor impacts are qualitative in nature and related to some degree to the distance of the activities from sensitive receptors. This project, which comprises public access improvements at an existing marina would not involve new source of odors resulting in long term generation of odors or the exposure of new receptors to existing or planned odors. Project-related emissions may result in short-term generation of odors emitting from construction equipment such as diesel exhaust and fuel vapors. However, as the project is contained wholly within District parklands and is located at a distance greater than 1,000 feet from adjacent properties the short-term, odorous emissions associated with construction would dissipate rapidly in the air, decreasing with increasing distance from the source, thus minimizing any potential exposure to residents. Visitor exposure to these odors would be limited through intermittent closures for those areas of the park that would potentially be adversely impacted by the construction activities. Thus, the project would not result in a significant odor impact.

Potential Impact: Less than Significant Impact

Mitigation: None Required

4.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a, b) 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; and 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? The project area is within a developed marina that includes pathways providing access to the lake and a café. The marina also includes a fishing pier, a gangway with floating dock, launch ramp and boat storage area. The project would be confined to a three-quarter acre construction area and an overflow parking area located approximately one-third mile away from the construction site. The project would involve: replacement of an existing path paralleling the western shoreline; removal and replacement of an existing launch ramp; installation of riprap and concrete block armor along 285 linear feet of lake shoreline; replacement of small watercraft floating dock and gangway; and installation of a fish planting pipe.

Habitat modifications. The proposed construction activities would require use of heavy construction equipment to complete the proposed public access and shoreline improvements. Earthwork construction at the

site would cover approximately 7,550 square feet. It would include the excavation of existing asphalt and concrete and stripping the site of the existing surface soil. Preparation for placing the riprap armor would also involve extracting a keyway at the toe of the shoreline slope, excavating benches at the stripped surfaces to the desired grade, and placing riprap and concrete block to armor the eroding the shoreline embankment. A total grading volume of 1,450 cubic yards is estimated to complete the proposed improvements.

Toxic substances typically involved in these construction activities include gasoline, lubricants, and other petroleum-based products. These products could enter the lake as a result of spills or leakage from machinery or storage containers if not appropriately controlled. Aquatic organisms exposed to these substances could be killed through exposure to lethal concentrations or exposure to non-lethal levels that cause physiological stress and increased susceptibility to other sources of mortality. Petroleum products also tend to form oily films on the water surface that could reduce dissolved oxygen levels available to aquatic organisms. (See Section 4.8 *Hazards and Hazardous Materials* Mitigation Measure **HAZ-1**).

A total of 24 trees have been identified in the immediate project area. Tree species include oaks (*Quercus* spp.) and willows (*Salix* spp.). There is also some shrub understory vegetation, but it is not extensive enough along the shoreline to stabilize the shoreline embankment. All of the trees occur in the upland areas outside of the area of inundation and as such do not provide overhead and/or shaded riverine aquatic (SRA) cover habitat for aquatic species. Eighteen trees (9 trees 6" or less in diameter at breast height [DBH] and 9 trees greater than 6" and less than 24" DBH) would be removed to accommodate the trail realignment to conform to ADA standards. Six remaining trees would be protected in place. As the project site is largely contained within a developed area, the removal of these trees would not result in fragmentation of existing woodlands, loss of understory species diversity, nor contribute to urban expansion into natural areas that would substantially degrade of the quality of the environment, nor substantially reduce existing habitat.

Special-Status Species. Special-status plants are species that are legally protected under the California Endangered Species Act (CESA) and Federal Endangered Species Act (FESA) or other regulations or are species considered sufficiently rare by the scientific community to qualify for such listing. No state or federally listed plant species were observed during site visits. In addition, no observations of special status plant species in the project area have been recorded in the CNDDDB (California Natural Diversity Database).

The park is located within an area is designated critical habitat for Alameda whipsnake (*Masticophis lateralis euryxanthus*), a federally and state listed species. This snake, which is found only in Alameda and Contra Costa Counties, has been noted most often in brushland areas which have rocky and grassy openings. While there are several hundred acres within the park that may offer suitable habitat for this animal, the project is not likely to adversely affect Alameda whipsnake (*Masticophis lateralis euryxanthus*) or any other listed plants or animals as the project site is in a disturbed developed area and the proposed improvements are focused on retrofitting failing infrastructure.

Implementation of Mitigation Measures **BIO-1** and **HAZ-1** would ensure that a less than-significant biological impact after mitigation would occur as a result of construction or operation of the proposed project.

Potential Impact: Less than Significant with Mitigation Incorporated

Mitigation: See **BIO-1** and **HAZ-1** Section 4.8

MITIGATION BIO-1: A wildlife biologist shall perform pre-project biological surveys for Alameda whipsnake (*Masticophis lateralis euryxanthus*) prior to the start of construction. Should Alameda whipsnake be found within the project during the pre-construction surveys or during construction activities an exclusion fence shall be installed under the direction of a District biologist along the perimeter of the work area to prevent whipsnakes and other terrestrial species from entering the project construction zone. In addition, a crew training program shall be provided to on-site workers to identify

the Alameda whipsnake along with on-site monitoring during construction activities involving grading, and tree removal.

c), d) 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; or 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?

The waters and banks of Lake Chabot would be affected by: the removal and replacement of an existing boat launch ramp; installation of riprap armor along the lake shoreline; replacement of a floating dock with gangway for launching small watercraft; and installation of a fish planting pipe. These infrastructure modifications would result in a net increase of 740 square feet of shaded area.

The vertical elevation change between mean low water and mean high water lake levels can vary as much as 10 feet within the project site. As a result, all of the shoreline work would be accomplished when the water level is below elevation 229 and the shoreline is not inundated. Earthwork construction within areas subject to seasonal inundation would consist of stripping the site of the existing surface soil, excavating a keyway at the toe of the slope, excavating benches to the desired grade and placing the riprap armor along the shoreline.

The purpose of the riprap buttress would be to stabilize the shoreline and minimize potential slope instability associated with lake wave action. The currently envisioned riprap and concrete block armor would be limited to a 285 -linear foot area along the western marina shoreline. Up to 200 to 250 cubic yards of riprap may be placed into the toe of the embankment during construction.

The installation of the 10 foot by 80 foot floating dock would require driving piles into bedrock at both ends of the floating dock and along the gangways that hinges from the shoreline at one end and is supported by the floating dock. The shaded area of the proposed dock would be approximately 1,200 square feet consisting of 800 square feet for the floating dock and 400 square feet for the gangway. A concrete abutment would be installed at the top of bank (elevation 229). During the initial phase the existing dock would continue to be used, but in a future phase it would be removed and replaced by a new dock. The existing wood floating dock has a shaded area of 96 square feet. Once removed from the marina the dock would be disposed of off site as described in Section 4.17 *Utilities and Services Systems*. In addition, immediately adjacent to the construction site is the marina complex that contains a boat storage area with a shaded area of 5,525 square feet and an existing accessible fishing pier that shades 685 square feet. At full build out the resulting overall increase of added shaded area (with the existing dock removed and the floating dock and gangway added) would be 740 square feet of open water and lake shoreline.

Short-term increases in turbidity and suspended sediment during water related construction activities may disrupt feeding activities of fish species or result in temporary displacement from preferred habitats. High concentrations of suspended sediment could also bury habitat for aquatic invertebrates, an important food source for fish. Consequently, fish growth rates could be reduced if suspended sediment and turbidity levels substantially exceed ambient levels for prolonged periods. To protect fish species significant restrictions for in-water work have been adopted by the California Department of Fish and Game (CDFG), National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS), and the United States Army Corps of Engineers (USACE). These restrictions would be enforced through implementation of Mitigation **BIO-2**.

Aquatic Resources. Submerged and Emergent Aquatic Vegetation. Cattails (*Typha spp.*) are the most common emergent plants, along with bulrushes (*Typha spp.*) and sedges (*Juncus spp.*). These species are established along much of the northeast shoreline of the marina area and provide habitat for fish and bird species. Several aquatic species of knotweed (*Polygonum spp.*) occur in slightly deeper water. Algae, especially

blue-green algae occur throughout the lake in some numbers. Aquatic plants of the genera *Potamogeton* and *Myriophyllum*, are also found throughout Lake Chabot, including the marina area where they are problematic in restricting boat passage. Periodic dredging operations in the marina area maintain boat passage, but affect the shallow water conditions conducive to these plants.

Aquatic Animals. The aquatic animals of the park are found primarily in Lake Chabot. Among the planktonic animals are species of rotifers, copepods and cladocerans. Game fish include rainbow trout, channel catfish, largemouth bass, bluegill, green sunfish, black crappie, and carp. Notable among these are native rainbow trout derived from landlocked native steelhead, which have not hybridized with the hatchery trout planted in the lake. These fish live in the Upper San Leandro Reservoir and spawn in Redwood and other tributary creeks to this upper reservoir. The primary habitat elements for this species are freshwater spawning, rearing, and migration areas; estuarine areas free of obstructions and of sufficient quality to support adult and juvenile rearing; and nearshore and offshore marine areas. During periods of high rainfall, some individuals are washed over the San Leandro Reservoir spillway and down to Lake Chabot. Non-game fish in Lake Chabot include golden shiner, goldfish, and Inland silversides. A more complete species list is found in Appendix B of the Resource Analysis (Anthony Chabot Regional Park, Resource Analysis, 1982).

Lake Chabot is managed for recreational fishing though fishing is prohibited in the marina as this area has been dredged to a bottom configuration to make it suitable for fish spawning. The lake is planted with 40,000 and 60,000 pounds of catchable rainbow trout and channel catfish annually with game fish planted exclusively by the EBRPD on a weekly basis throughout the year. Installation of the new fish-planting pipe is intended to facilitate this operation.

Special-Status Aquatic Species. Western Pond turtles (*Clemmys marmorata*) are present in low density in the marina area. The lateral extent of the aquatic habitat includes the stream channels within the designated stream reaches, and includes a lateral extent as defined by the ordinary high-water line (33 CFR 329.11). This aquatic habitat designation would be applicable to any in-water construction activities.

Navigable Waters of the United States. Lake Chabot is considered a Navigable Waters of the United States, as defined in the Federal Register (FR; 33 CFR Part 329). Any development within the lake must comply with Section 10 of the Rivers and Harbors Act of 1899 (33 USC. 403) and Section 404 of the Clean Water Act (33 USC. 1344). Section 10 requires that a permit be obtained from the US Army Corps of Engineers (USACE) to obstruct or alter a Navigable Waters of the US. Section 404 requires that a 404 Permit be obtained from the USACE to discharge dredged or fill material into Waters of the U. S. (Navigable Waters are a subset of Waters of the US). The US Army Corps of Engineers Section 404 (discharge, dredge, or fill) Permit and State Department of Fish and Game 1600 Streambed Alteration Agreement require specific measures to avoid impacts on fish and wildlife during and following construction.

Where trail, launch ramp, floating dock and gangway improvements are proposed to improve accessibility the work would be permitted under: 1) *Streambed Alteration Agreement Renewal Routine Maintenance Agreement Alameda and Contra Costa County (CDFG 2005)*; 2) *East Bay Regional Park District, Regional Maintenance Activities, Alameda and Contra Costa Counties, Order No. R2-2004-0057 (RWQCB 2004)*; and 3) *Department of the Army Regional General Permit 13 (USACOE 2005)*.

Construction timing restrictions per mitigation measures **BIO-2** and **BIO-3** would minimize construction related effects on aquatic habitat and impacts to aquatic species. Adherence to these construction practices would allow for the placement of the required structures and riprap without adversely impacting the Lake Chabot aquatic habitat. Implementation of Mitigation Measures **GEO-1** and **GEO-2**, set forth in Section 4-6, Seismicity, Soils, and Geology would further minimize potential habitat impacts and take of listed species to a less than significant level.

Potential Impact: Less than Significant with Mitigation Incorporated

Mitigation: See **BIO-2**, and **GEO-1** and **GEO-2** Section 4.6

BIO-2 In-water construction work associated with the placement of the abutments, piers, and riprap shall be limited to August 1 to October 31 to protect the aquatic habitat and native and planted aquatic populations at Lake Chabot.

e) **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?** As noted above, there are a total of 24 trees in the immediate project area including 21 oak trees. Eighteen of these trees are scheduled for removal and six are designated for protection. All of these trees are located in adjacent uplands outside of the aquatic zone of the lake. Because the project would be carried out entirely within the regional park, implementation of the project would be conducted in accordance with the District's policies and ordinances. Where trees are designated for protection the project would be conducted to ensure the long term vitality of the trees.

Implementation of the mitigation measure **BIO-3** would ensure protection of the trees scheduled for retention during construction. Mitigation **BIO-4** would ensure that oak tree numbers and associated habitat values within the park would not be reduced.

Potential Impact: Less than Significant with Mitigation Incorporated

Mitigation: See **BIO-3** and **BIO-4**

Mitigation Measure BIO-3. The District shall communicate and enforce the following Best Management Practices (BMP) to the construction contractor to avoid damage to the trees scheduled for protection. All trees designated for protection shall be clearly marked by the District Representative and these trees shall be identified in the field at a pre-construction meeting with the Contractor. At this meeting the contractor shall be directed to:

- Install protective fencing to demarcate the drip line of protected trees
- Avoid trenching, grading, or paving into the drip line area
- Not change, by more than two feet, grade elevations within 30 feet of the drip line
- Not park or operate any motor vehicle within the drip line area
- Not place or store any equipment or construction materials within the drip line
- Not attach any signs, ropes, cables, or any other items to any tree
- Not to place or allow to flow into or over the drip line area of any protected tree any oil, fuel, concrete mix, or other deleterious substance.

Pruning shall be minimized to the greatest extent feasible. Where pruning is required for equipment access and to facilitate construction activities it shall be performed under the direction of the District Project Manager.

Mitigation Measure BIO-4. The proposed project shall include the planting of approximately two new oak trees to replace each oak tree that would be removed to complete the project improvements. New oak trees shall be planted in woodland areas within the park at a location to be determined by the District.

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 adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or State habitat conservation plans are known to exist for the project area. As a result, the Plan would not conflict with any of these types of conservation plans.

Potential Impact: No Impact

Mitigation: None required

4.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the <i>CEQA Guidelines</i> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the <i>CEQA Guidelines</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a, c) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the *CEQA Guidelines*; Section 15064.5 of the *CEQA Guidelines* defines a resource as “historically significant” if it is associated with events important to California’s history, is associated with the lives of important persons, embodies distinctive construction characteristics, or contributes important prehistoric or historic information. A significant adverse impact would occur if the project would cause the historical resource to be “materially impaired,” as defined in Section 15064.5 of the *CEQA Guidelines*. The closest historic resource would be the dam at Lake Chabot which was constructed in 1847. However, this dam is located more than 1,000 feet from the project site and the project would not result in any changes to this structure. Therefore, no adverse changes to historical resources are anticipated.

Potential Impact: No Impact

Mitigation: None

b, d) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the *CEQA Guidelines*; c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? or d) Disturb any human remains, including those interred outside of formal cemeteries? Cultural resources are places or objects that are important for scientific, historic or religious reasons to cultures, communities, groups or individuals. Cultural resources include human-made artifacts, structures and sites possessing archaeological or historic significance such as a Native-American burial or an architectural landmark. District Cultural Resources Policy (EBRPD Board Resolution 1989-4-124) calls for the preservation and protection of known archaeological resources in place according to State and federal law. Furthermore, the District keeps the location of known archaeological resource sites confidential as they are vulnerable to disturbance and destruction. A search of the records of previously discovered prehistoric resources revealed only one such site in nearby Anthony Chabot Park (Banks, 1982). This site consists of four groups of bedrock mortars located in the vicinity of the Willow Park Public Golf Course (ibid.). A surface survey of about 500 acres of Anthony Chabot and Lake Chabot Regional Parks (in areas where development has occurred or may occur) did not uncover any further prehistoric resources (ibid.). Subsequently, staff has noted what may be two bedrock mortars along Chabot Ridge north of Cottontail Canyon. None of these archaeological resources are in proximity to the developed area that comprises the project site.

However, it is possible that unknown archaeological or paleontological material could be uncovered during the minor ground-clearing and other earth-moving activities associated with the project, resulting in a potentially significant adverse impact under CEQA. If this were to happen, the District would follow its established protocol for appropriate treatment of these materials.

Implementation of District Cultural Resources Policy (EBRPD Board Resolution 1989-4-124) along with Mitigation Measures **CULT-1**, **CULT -2**, and **CULT-3** would avoid or reduce potentially significant impacts to archaeological and paleontological resources to a less-than-significant level.

Potential Impact: Less than Significant with Mitigation Incorporated
Mitigation: See **CULT-1**, **CULT -2**, and **CULT-3**

MITIGATION CULT-1: A District representative shall monitor ground-disturbing activities to ensure there are no impacts to prehistoric or historic resources, and comply with District Cultural Resources Policy (EBRPD Board Resolution 1989-4-124) if resources are encountered.

MITIGATION CULT-2: In the event that prehistoric, archaeological or paleontological artifacts or remains are encountered during project construction, all ground disturbing activities shall be halted within a minimum of 50 feet and artifacts shall be protected in place (in accordance with EBRPD Board Resolution No. 1989-4-124 and State and federal law) until the find is evaluated by an archaeologist or , trained cultural resource professional, and appropriate mitigation, such as curation, preservation in place, etc., if necessary, is implemented.

MITIGATION CULT-3: In the event of accidental discovery of human remains, the County Coroner shall be notified, and, if the remains are determined to be of Native American origin, the Native American Heritage Commission (NAHC) would be notified to identify the Most Likely Descendant (MLD), in accordance with State and federal law. The disposition of the remains shall be coordinated between EBRPD, the County Coroner, NAHC, MLD and the archaeological consultant.

4.6 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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. The site is directly underlain by the East Chabot Fault. The fault is generally not considered to be active and is located outside the State mandated "Alquist-Priolo" earthquake Fault Zoning Act "Special Studies Zone" for active faults. Therefore, a Less than Significant Impact is anticipated.

Potential Impact: Less than Significant
Mitigation: None required.

ii) Strong Seismic Ground Shaking. The proposed project area is located within the uplifted Berkeley-Hayward Hills within the seismically active San Francisco Bay Area. The closest major active faults are the San Andreas, Hayward and Calaveras with main traces mapped to lie approximately 19

and one miles to the southwest and seven miles to the east respectively. The following table summarizes information on historical earthquakes and estimated magnitude for future earthquakes on these and other more distant faults.

Table 4 – 2 Active Faults in the Project Vicinity

Faults	Maximum Magnitude	Historical Earthquakes	Estimated Magnitude
San Andreas	8.3	1989 Loma Prieta 1906 San Francisco 1865 Santa Clara 1838 San Francisco	7.1 8.3 6.5 7.0
Hayward	7.3	1836 Hayward* 1868 Hayward 1858 Hayward	6.8 7.0 6.8
Calaveras	7.3	1984 Morgan Hill 1911 Morgan Hill 1897 Gilroy	6.3 6.5 6.3

* Possibly near San Juan Bautista, and thus San Andreas or other fault
Source EarthMax Consultants, Inc. (February 18, 2010)

The nearest active fault is the Hayward Fault located approximately one mile to the southwest. Thus, the main hazard from earthquakes is expected to be related to the strong ground shaking that is produced by faults in the site vicinity. A study of the U.S. Geological Survey (2003) suggests that there is a 62 percent chance of one or more large magnitude (seven or greater) earthquakes in the San Francisco Bay region within the next 30 years.

Because Lake Chabot is located in a region of high seismicity, the entire area would experience strong ground shaking in the event of an earthquake. This is a substantial hazard throughout the region. In the event of a high magnitude earthquake the project site would be subject to potentially significant damage. Earthquake damage could include landslides blocking or damaging trails and docks, rupture of water and sewer lines, loss of electrical power, downed electrical transmission lines, and possible secondary fires. The possible rupture of sewer lines could result in sewage reaching Lake Chabot. However, it is not anticipated that either the Upper San Leandro Dam or the dam at Lake Chabot would fail as a direct result of seismic shaking or seiche. Both dams have been improved in accordance with the recommendations of the best scientific evaluation available. Further, the dam which forms Lake Chabot survived the 1906 earthquake that occurred along the nearby portions of the San Andreas Fault.

While the project is located in a region of high seismicity, the proposed project would not increase risk of ground shaking. Moreover, the project is expected to improve public safety within the immediate project site by stabilizing a failing shoreline embankment and improving public recreation infrastructure. Thus, potential substantial adverse effects, including the risk of loss, injury, or death, related to strong seismic ground shaking from an earthquake would be lessened through the completion of the proposed public access and stabilization improvements.

Potential Impact: Less than Significant

Mitigation: None required.

iii) Seismic-related Ground Failure and Liquefaction. Liquefaction is a soil behavior in which a soil loses a significant amount of strength due to high excess pore water pressure generated by strong earthquake shaking. The potential for liquefaction is a function of the occurrence of strong ground shaking and soil susceptibility. When strong ground shaking occurs, loose to medium dense, saturated sandy soils (i.e., located below groundwater level) are susceptible to liquefaction. Sands that have fines (particles finer than No. 200 sieve) tend to be less susceptible to liquefaction than those sands with less fines. Due to the presence of still soil, shallow bedrock and an absence of groundwater at a depth of 14

feet along the trail, the potential was evaluated as negligible. (Source: EarthMax Consultants, Inc., February 18, 2010). Therefore, implementation of the project would have a less-than-significant adverse impact related to seismic-related ground failure and liquefaction.

Potential Impact: Less than Significant

Mitigation: None required

iv) Landslides. Slope failure can occur as either rapid movement of large masses of soil (“landslide”) or slow, continuous movement (“creep”). The primary factors influencing the stability of a slope are: the nature of the underlying soil or bedrock; the geometry of the slope (height and steepness); rainfall; and the presence of previous landslide deposits. Within the project area slopes are underlain by the various bedrock units that are commonly mantled with colluvium, with isolated occurrences of variably weathered bedrock exposed at the ground surface. Nilsen (1975) has identified landslides and other surficial deposits for the Hayward Quadrangle. Nilsen does not identify large scale landsliding in the immediate site vicinity. The adjacent slopes are indicated to be underlain by colluvium.

Potential Impact: Less than Significant

Mitigation: None required

b) Result in substantial soil erosion or the loss of topsoil? Soil types in the park are primarily loams. These are thin upland soils of the Gaviota, Los Gatos, Los Osos and Millsholm series, developed under forest and grassland conditions. All have a low shrink swell capacity, low or moderate erosion hazard, and present few engineering difficulties (Soil Conservation Service, 1981). At the Lake Chabot Marina and entrance, there is a small area of clay soils from the Altamont Series (ibid.). This is the only heavy clay soil within the Park.

Existing soil erosion problems at the project site range from moderate to severe and are primarily associated with human activities and wave action from Lake Chabot. These include trail development and shoreline embankment enforcement. In this case, the existing retaining wall is failing as evidenced by bank undercutting, headward erosion scarps and deeply incised channel profiles. These problems are contributing to silt deposition.

The site of the proposed trail realignment and bank stabilization is located along the southwestern shore of Lake Chabot, just east of the Marina Café. An existing trail leads from the café to the fishing pier located downslope from the main trail. Below this fishing pier access trail is an approximately 5-foot high steep slope, held up by a wood retaining wall that is failing as a result of wave action. The wood retaining wall is supported by short piers embedded in the embankment adjacent to the beach area. The EBRPD has added some rakers against the retaining wall foundation as a temporary repair. The fishing pier is also suffering from instability due mainly to slope toe erosion from wave action of the lake. To complete the proposed project a total volume of 1,450 cubic yards would be graded within a contained area consisting of approximately 7,550 square feet of the site. Earthwork construction would consist of stripping the site of the existing near-surface soil, excavating a keyway at the toe of the slope, excavating benches at the stripped surfaces to the desired grade and placing the riprap and concrete block armor to bring the site to the design finish grade. The installation of the floating dock would require drilling piles into bedrock at the end and mid points of the 10 foot by 80 foot long dock and gangway. A concrete abutment would be installed at the toe of the slope (elevation 229.)

Short-term increases in turbidity and suspended sediment would be reduced to a less than significant level with implementation of Mitigation Measures **AIR-1** Section 4-3, **GEO-1**, and **GEO-2**. Installation of 285-linear foot riprap buttress at the base of the western shoreline would reduce surface erosion and siltation problems caused by wave action in the future.

Potential Impact: Less than Significant with Mitigations Incorporated

Mitigations: See **AIR-1** Section 4.3, **GEO-1**, and **GEO-2**.

MITIGATION GEO-1: The contractor shall be required to implement appropriate Best Management Practices for minimizing potential erosion and sedimentation within the upland project area. These measures include, as appropriate to the site conditions: conducting activities during the dry season (July 1-November 30); using dikes, basins, ditches, straw, erosion control fabric and other temporary measures (e.g., water bars, fiber rolls); and installing catchments for source pollutants while in-water work within jurisdictional waters shall be limited to August 1-October 31.

MITIGATION GEO-2: The contractor shall exercise a due standard of care and judgment to protect the integrity of the project site and shall stop work when adverse weather or anticipated rainfall has made or would make construction work inadvisable. In any event, rain in the amount of one inch or more in a seventy-two hour period shall result in a postponement of construction activities.

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; The bedrock of the park consists mainly of sandstone, shale and conglomerate rocks, deposited during the Cretaceous period (Robinson, 1956, Radbruch, 1969). Originally classified as a single geologic unit (the Chico formation), these rocks are now divided into three units; the name "Chico" formation is applied only where the units have not been studied in detail and differentiated (Perkins, 1974). While wave action is currently undermining existing infrastructure along the western shoreline, one of the purposes of the project would be to minimize potential slope instability. This would be accomplished by installing approximately 285-linear foot riprap buttress at the base of the western shoreline of the marina, thus protecting the pathway and fishing pier against wave action in the future. Therefore, implementation of the project would have a beneficial impact related to soil stability (Source: EarthMax Consultants, Inc., February 18, 2010). Given that the potential for liquefaction was evaluated as negligible, the project would not contribute to nor be affected by liquefaction (See response a-iii above).

Potential Impact: No Impact
Mitigation: None required

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? Based on referenced publications, (Dibblee, 1980, and Graymer, 2000 and Graymer et al, 1996), the site vicinity is underlain by a variety of rock types which trend in narrow bands to the northwest. The proposed trail location is underlain by a thin veneer of alluvium, which overlies serpentine (Dibblee or gabbro (Graymer and Graymer et al). Also located in the near vicinity is the Joaquin Miller formation, consisting of thinly bedded shale with minor sandstone. These soils present few engineering difficulties and are not considered expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994). Therefore, implementation of the project would be expected to have a negligible impact related to construction on these soils.

Potential Impact: No Impact
Mitigation: None required

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? No septic tanks or alternative waste disposal systems are required or being constructed for the proposed project, and no potential impacts associated with septic systems would occur. Therefore, the capacity of the soils to adequately support waste disposal systems is not applicable.

Potential Impact: No Impact
Mitigation: None required

4.7 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GREENHOUSE GAS EMISSIONS Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the earth, similar to a greenhouse. The accumulation of GHGs has been implicated as a driving force for global climate change generally described as the changing of the earth's climate caused by natural fluctuations and anthropogenic activities that alter the composition of the global atmosphere. Individual projects contribute to the cumulative effects of climate change by emitting GHGs during demolition, construction, and operational phases. The primary GHGs associated with land use development projects are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Although the presence of the primary GHGs in the atmosphere is naturally occurring, CO₂, CH₄, and N₂O are largely emitted from human activities, accelerating the rate at which these compounds accumulate in the earth's atmosphere. CO₂ is the "reference gas" for GHG emissions, meaning that emissions of total GHGs are typically reported in "carbon dioxide equivalent" (CO₂e). Emissions of CO₂ are largely by products of fossil fuel combustion.

The construction phase of the Lake Chabot access and bank stabilization project would include the transport of workers to and from the project site and the operation and idling of heavy equipment, temporarily increasing CO₂ emissions and generating heat. These construction related impacts are limited in scope and short-term in duration. Long term, once the project is completed, management of the site would continue to be accomplished by existing EBRPD staff so vehicle trips and associated emissions would return to current levels. Thus, the project-related emissions would be characterized as a temporary, construction-related impact. The Bay Area Air Quality Management District (BAAQMD), in its CEQA Air Quality Guidelines (2010) Table 2-1 establishes no performance threshold for construction-related impacts.

In terms on ongoing operational impacts, the project is anticipated to encourage non-motorized recreation activities along the shoreline and in the lake. These recreation activities would not add to cumulative accumulation of GHGs implicated as a driving force of projected climate change.

Fuel energy is used by park patrol vehicles, by maintenance vehicles and equipment, and by park visitors who travel to and from the park and operate their vehicles within the park. Electrical energy is used to pump water to the park, to remove sewage from the park, and to supply the energy for boat motors and for various maintenance and operations facilities. However, it is anticipated that the proposed project would not result in an increase of emissions from any of these sources as this project only involves the refurbishment of existing facilities already used by park visitors and maintained by park employees.

Therefore, the proposed project would have a less-than-significant impact with respect to construction or operational GHG emissions.

Potential Impact: Less than Significant

Mitigation: None required

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? The California Office of Public Resources (OPR) has updated Appendix G of the State CEQA Guidelines to address impacts of GHG emissions, as directed by SB 97 (2007). The amendments became effective March 18, 2010. Although the amendments provide criteria to evaluate a project's GHG emissions, they do not establish quantitative significance thresholds. According to the revised Appendix G of the State CEQA Guidelines, an impact related to global climate change is considered significant if the proposed project would: generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

It is anticipated that the proposed project would not raise the level of annual operational emissions after build out as this project only involves the refurbishment of existing trails for non-motorized use, stabilization of an eroding embankment onto a beach area and replacement of docks for non-motorized and electric boats at an existing marina already used by park visitors and maintained by park employees. Thus, completion of the project would not result in an increase of motorized traffic or other the human activities that would result in an increase in average global temperatures and associated changes in climatic conditions over the long term thereby conflicting with any adopted applicable plan, policy or regulation.

To minimize one-time construction emissions the contractor would be required to adhere to best management practices to reduce GHG emissions during construction including turning off engines when not needed thereby reducing the amount of fuel burned through unnecessary idling and transporting construction. Heat sources would be shielded by equipment covers protecting nearby objects from high heat. Additionally, the effects of residual heat diminish rapidly within a short distance of the equipment and permanently after the work ceases.

Life-cycle emissions are not included in the analysis in accordance with a California Air Pollution Control Officers Association (CAPCOA) white paper that states: "*The full life-cycle of GHG emissions from construction activities is not accounted for in the modeling tools available, and the information needed to characterize GHG emissions from manufacture, transport, and end-of-life of construction materials would be speculative at the CEQA analysis level.*"

Accordingly, the BAAQMD *CEQA Air Quality Guidelines* (June, 2010), establish no construction-related thresholds for GHG emission. Furthermore, the project would not be expected to increase the level of recreational use or vehicle trips or emissions. Therefore, this project would have a less-than-significant impact with respect to cumulative GHG emissions.

Potential Impact: Less than Significant

Mitigation: None required

4.8 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a), b) a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or 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? The proposed project construction activities would require use of small quantities of potentially hazardous materials, such as fuels, oils, and solvents used for equipment. Spills, upsets, or other project-related accidents, along with the transporting of materials could result in the release of fuel or other hazardous substances into the environment. Toxic substances used at the construction site, including gasoline, lubricants, and other petroleum-based products could enter the lake as a result of spills or leakage from machinery or storage containers if not appropriately controlled. These substances could kill aquatic organisms through exposure to lethal concentrations or exposure to non-lethal levels that could cause

physiological stress and increased susceptibility to other sources of mortality. Petroleum products also tend to form oily films on the water surface that could reduce dissolved oxygen levels available to aquatic organisms. Additionally, such a spill may render surviving fish unfit for human consumption for some period of time.

Implementation of Mitigation Measure **HAZ-1** would reduce the potential for adverse impacts from incidents associated with the transport and use of potentially hazardous materials to a less than significant level.

Potential Impact: Less than Significant with Mitigation Incorporated

Mitigations: See **HAZ-1**.

MITIGATION HAZ-1: The transport, storage and use of potentially hazardous materials shall conform to the following provisions:

- All equipment shall be inspected for leaks immediately prior to the start of project activities and regularly inspected henceforth until equipment is removed from the premises.
- The contractor(s) shall prepare an emergency spill response plan prior to the start of the project and maintain a spill kit on-site throughout the duration of the proposed project. In the event of a spill or release of any chemicals during activities associated with the proposed project, on or adjacent to park property, the contractor shall immediately notify the appropriate District Representative (e.g., project manager or supervisor). Emergency containment procedures shall be initiated immediately to prevent contamination.
- Hazardous materials required for construction shall be contained within vessels engineered for safe storage. Large quantities of such materials shall not be stored on-site.
- Equipment shall be refueled, cleaned and repaired outside park boundaries, or within a contained area on site away from open waters, except during emergency situations. All contaminated water, spill residue, or other hazardous compounds shall be disposed of outside park boundaries at an authorized location.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? There are no schools or proposed schools within one-quarter mile of the proposed project site. The closest school, Redwood Alternative High School in Castro Valley, is located approximately one mile from the project site.

Potential Impact: No Impact

Mitigation: None required.

d) Be located on a site which is 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? The proposed project area is not included on the Department of Toxic Substances Control's (DTSC's) Hazardous Waste and Substances Site List - Site Cleanup (Cortese List) pursuant to Government Code §65962.5 (AB 3750) Source: Internet site: http://www.dtsc.ca.gov/SiteCleanup/index.cfm#Cleanup_Sites reviewed June 22, 2010).

Potential Impact: No Impact

Mitigation: None required.

e, f) 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; or 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? The project site is not located within an airport land use plan or within two miles of a public airport or public use airport; nor is the proposed project in the vicinity of a private airstrip. Therefore, implementation of the proposed project would not expose people working in the project area to airport related hazards.

Potential Impact: No Impact
Mitigation: None required.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? The project would not impair implementation of, or physically interfere with, an adopted emergency response or evacuation plan. The proposed infrastructure improvements that include replacing deteriorating trails, ramps and boat docks would facilitate emergency egress from the project site in the event of an emergency evacuation of the marina complex.

Potential Impact: No Impact
Mitigation: None required.

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? The project site located at the wildland-urban interface is subject to wildfire risk and is designated a Very High Fire Hazard Severity Zone in an area of State or federal responsibility (Source: Internet www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones.php, June 22, 2010). This condition is accentuated by dry, windy climatic conditions during summer/fall months (June through October), along with a landscape comprised of a mosaic of annual grasses, chaparral and flammable trees. However, the proposed project would not add any new uses that would create additional long term or permanent increased fire risks.

For a short term period the proposed project would involve the use of heavy equipment that could magnify fire risk, particularly during warmer days. Sparks could generate from improperly outfitted exhaust systems or friction between metal parts crushing rocks. Implementation of Mitigation Measure **HAZ-2** would ensure that heavy equipment operators take appropriate precautions to reduce fire risk to a less than significant level.

Potential Impact: Less than Significant with Mitigation Incorporated
Mitigation: See **HAZ-2**.

MITIGATION HAZ-2: A safety plan shall be developed by the contractor and reviewed by all District project staff prior to the start of any work, including the following measures to reduce fire hazards:

- Spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers shall be required for all heavy equipment.
- Work crews shall be required to park vehicles away from flammable vegetation, such as dry grass and brush. At the end of each workday, heavy equipment shall be parked over mineral soil, asphalt, or concrete at a location agreed upon by the Contractor and District Representative prior to project commencement.
- Park staff shall be required to have a District radio on-site, which would allow for direct contact to Calfire and the centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire. Fire suppression equipment (i.e., fire extinguishers) shall also be available at the project site.

4.9 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a, f) a) Violate any water quality standards or waste discharge requirements; or f) otherwise substantially degrade water quality? Water quality objectives for the project area are specified in the Water Quality Control Plan for the San Francisco Bay Area prepared by the San Francisco Regional Water Quality Control Board (SFRWQCB) in compliance with the federal and State (California Water Code section 13240) regulations. The SFRWQCB Plan contains water quality objectives for lakes, rivers and their tributaries within its jurisdiction.

The three-quarter acre project site is located along the Lake Chabot shoreline at the public marina, a small, relatively enclosed section of the lake. Fishing and boating are permitted activities, though body-contact water-sports are not permitted due to the emergency water supply status of the lake.

Currently, the trail paralleling the shoreline is failing as a result of wave action on Lake Chabot. As a remedial measure the project would replace the trail and stabilize the embankment by constructing two low retaining walls (less than 3 feet in height) and installing a riprap buttress with a keyway on approximately 285 linear feet of lake shoreline thereby substantially reducing further degradation of lake water quality associated with the existing bank erosion.

While the project is confined to an area of less than one acre construction activities over the short term would have the potential to contribute to erosion adversely affecting the quality of the runoff water and of the waters of Lake Chabot. To reduce the discharge of pollutants in stormwater discharges to the maximum extent practicable during construction Best Management Practices would be employed– including control techniques, design and engineering methods, and other measures as appropriate - through the implementation of mitigations **AIR- 1, GEO-1, GEO-2** and **HYDRO-1**. These actions would reduce potential short term impacts associated with sediment and pollutant discharges to a less than significant level. Authorization for in-water work will be required by the California Department of Fish and Game (CDFG), SFRWQCB, and the United States Army Corps of Engineers (USACE) pursuant to Section 1600 of the California Fish and Game Code, Section 401 of the Federal Clean Water Act, and Section 404(d) of the Federal Clean Water Act respectively. Compliance with the regulatory permitting process and resulting requirements would provide additional water quality protection and reduce potential for degradation during project implementation.

Over the long term the completion of the remedial actions of trail replacement and bank stabilization would ultimately reduce the quantity of sediments entering the lake resulting in a beneficial project outcome.

Potential Impact: Less than Significant with Mitigation Incorporated

Mitigation: See **AIR- 1** Section 4.3, **GEO-1, GEO-2** Section 4.6 and **HYDRO-1**

MITIGATION HYDRO-1: The Contractor shall comply with the Best Management Practices (BMPs) in the 2009 Construction BMP Handbook / Portal by the California Stormwater Association (CASQA) [www.CASQA.org] in each of the work areas including construction staging areas, prior to and immediately after grubbing and clearing including but not limited the installation of silt fencing and fiber rolls. Erosion control measures shall remain in place, and be maintained until removed at the direction of the District inspector. Exposed work areas shall be hydroseeded and mulched at the close of construction at the locations shown on the construction plans.

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)? The project does not propose to use groundwater supplies nor does it propose the construction of infrastructure or facilities that would increase impervious surfaces leading to a substantial depletion of groundwater supplies. As all of the proposed paving (approximately 7,550 square feet) replaces existing paved surfaces, there would be no new interference with groundwater recharge. Therefore, the proposed project would not substantially or permanently affect groundwater levels.

Potential Impact: No Impact

Mitigation: None required

c, d) 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 which would result in substantial erosion or siltation on- or off-site; and 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?

The park lies entirely within the San Leandro Creek watershed. The runoff characteristics of the San Leandro Creek watershed are influenced by the presence of the Upper San Leandro Reservoir. This reservoir is one of the terminal storage facilities in EBMUD's system; it receives water from EBMUD's water supplies in the Sierra Nevada Mountains. The Upper San Leandro Reservoir is drawn-down during the summer months and is refilled primarily with water from the Sierra Nevada Mountains during the winter months. Local runoff from storms that occur early in the winter months are retained in the Upper San Leandro Reservoir. Towards the end of the winter and in the spring when Upper San Leandro Reservoir is full local runoff is passed through the spillway and flows down San Leandro Creek to Lake Chabot. The local watershed (including only that area located below Upper San Leandro Reservoir) is 12 square-miles. Lake Chabot, a 315-acre reservoir, is another one of the five terminal reservoirs in EBMUD's water distribution system. The lake has an estimated capacity of 4.1 billion gallons of water. The water level of the lake fluctuates about 10 feet each year; the high level occurs in the early spring and the low level in the late summer (*Anthony Chabot Regional Park Land Use-Development Plan Environmental Impact Report*, February 21, 1984).

Project activities focus on replacement of dilapidated park and marine infrastructure. Proposed construction activities within the area of periodic lake inundation include: placement of riprap armor on approximately 285 linear feet of lake shoreline, replacement of a dock with gangway for docking boats and installation of new fish planting pipe. Other work includes the replacement of an existing trail to conform to current ADA standards. The project would be contained within the existing marina site and would not alter the existing drainage patterns of the site or surrounding area. On-site erosion would be mitigated through the replacement of an existing retaining wall with new retaining walls and a riprap buttress along approximately 285 linear feet of lake shoreline. None of these improvements would result in alterations to the course of a stream or river or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.

While the project would ultimately reduce the quantity of sediments entering the lake, construction activities, compounded with natural weathering and erosion processes could create or contribute to sediment runoff. This would be especially likely during rain events thereby adversely affecting the quality of the runoff water and of the waters of Lake Chabot over the short term. However, the construction activities would be scheduled during the dry season (July 1- November 30) when water levels are low. Therefore, potential short term impacts associated with construction related sediment and pollutant discharges would be less than significant.

Potential Impact: Less than Significant

Mitigation: None required

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? The construction work would be contained within an existing marina site. These activities would not alter the existing drainage pattern of the site or area such that on- or off-site flooding would result. Nor would it create or contribute to an increase in runoff water which would exceed the capacity of existing or planned stormwater drainage systems.

Furthermore, implementation of BMPs to reduce pollutants in stormwater discharges to the Maximum Extent Practicable (MEP) would reduce potential erosion resulting from construction activities to less than significant with the implementation of mitigations **AIR- 1, GEO-1, GEO-2** and **HYDRO-1**. Moreover, the District's

Construction Inspector will perform inspections of the construction area, to verify that the BMPs specified in the erosion and sediment control plan are properly implemented and maintained. The District Construction Inspector would notify contractors immediately if there is a noncompliance issue and would require compliance.

Potential Impact: Less than Significant with Mitigation Incorporated

Mitigation: See AIR- 1 Section 4.3, GEO-1, GEO-2 Section 4.6 and HYDRO-1

g, h, i) 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 flood hazard delineation map; h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows; and 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. For purposes of this environmental document, an impact is considered significant if the proposed project substantially increases exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood. The Federal Emergency Management Agency (FEMA) publishes Flood Insurance Rate Maps (FIRM) that delineate flood hazard zones for communities. According to the FIRM for the project site is designated "X" = area determined to be outside the 0.2 per cent annual chance of floodplain (Source: (Federal Emergency Management Agency Flood Insurance Rate Map Contra Costa County, California Unincorporated Areas, Community Panel Number 06001C0278G, ALAMEDA CO UNINC & INC AREAS, 08/03/2009) Source: Internet www.fema.gov/hazard/map/firm.shtm accessed June 23, 2010).

The project does not include construction of housing or any other major structures that would potentially impede or redirect flood flows. As a marina project portions of the project site would be subject to inundation by intent and through the natural topography of the land. While located on the shoreline of a reservoir the project site is located more than 1,000 feet from the Lake Chabot Dam. The proposed improvements would primarily involve shoreline improvements and pilings to support a floating gangway and dock. These project elements would have no effect on reservoir water levels or the structural integrity of the dam.

Localized flooding, which is not shown on the FEMA maps occurs in four areas of the park including the Marina. Localized flooding in the project area can occur when heavy runoff combines with high lake levels. However, the launch ramp and fish planting pipe are designed to withstand inundation. Moreover, the proposed retaining wall and the riprap armoring would substantially reduce impacts of wave action along the shoreline during periods of high water providing protection for the trail replacement project that would be located ten feet above the high water line of the lake. There are no other structures in the project area that would be affected by localized flooding.

Potential Impact: Less than Significant

Mitigation: None required

j) Inundation by seiche, tsunami, or mudflow? Wave action within Lake Chabot could result in inundation by seiche during a high magnitude seismic event. However, even in the unlikely event that a seiche were to occur, it would not increase exposure of residents or businesses (other than the park marina complex) to hazards as the nearest residents and businesses are located 370 to 770 feet above and at a distance greater than 2,000 feet to the south and one mile to the west of the lake shoreline. Inundation from tsunami activity is not likely to occur, because at an elevation of approximately 230 feet above sea level and approximately six miles removed from the San Francisco Bay, the proposed project area is not in proximity to the area that would be affected by Pacific Ocean generated tsunamis.

While landslides and other surficial deposits for the Hayward quadrangle have been identified at a regional scale, landsliding in the immediate vicinity has not been identified (EarthMax Consultants 2010). Based on exploratory borings, the project site would not be subject to inundation by mudflow as soils that dominant the site are typically underlain by silty clay that is 3 1/2 feet to 5 feet thick underlain by highly weathered weak

shale. These are thin upland soils of the Gaviota, Los Gatos, Los Osos and Millsholm series, developed under forest and grassland conditions that all have a low shrink swell capacity, low or moderate erosion hazard, and present few engineering difficulties (Soil Conservation Service, 1981). Moreover, construction activities would be limited to the dry season (July 1- November 30) and would not include any construction activities during heavy rain events, when flooding resulting in the potential for mudflows would most likely occur.

Potential Impact: Less than Significant

Mitigation: None required

4.10 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
LAND USE AND PLANNING -- Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■

a) Would the project physically divide an established community? The construction area is located inside a large regional park. As a regional parkland there are no established communities located within the project site. The closest private developments are located 2,000 feet to the south and east, one mile to the west and two miles to the north. Therefore, implementation of the project would not physically divide an established community as the project area is wholly contained within Lake Chabot Regional Park.

Potential Impact: No Impact

Mitigation: None required

b, c) b) Would the project 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 or c) 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? The project does not propose to change any adopted land use plans. It is consistent with goals and policies to improve access compliant with the federal Americans with Disabilities Act and the District's 1997 Master Plan policies to conserve and protect the lake shorelines and public access. It is therefore, consistent with adopted plans and policies discussed in this section.

The Open Space and Conservation Element of the Alameda County General Plan (Alameda County, 1973) designates the site as open space. The plan also includes policies advocating park, recreation and nature areas within the open space adjacent to each community; keeping ridgelines and steep slopes as open space; limiting development in open space areas by prohibiting high-density commercial recreation areas; and encouraging low-intensity commercial recreation in selected open space areas for the purpose of avoiding or mitigating adverse environmental effects associated with high-density developments.

Lake Chabot and the adjacent property (totaling about 1,500 acres) are owned by the EBMUD and maintained and operated by the EBRPD. The basis of the lease agreement is the EBMUD policy document, *Land Use Master Plan of the East Bay Municipal Utility District* (1970). In the EBMUD Land Use Master Plan, the Lake Chabot area is classified primarily as a Recreation Management Area and further divided into the following categories: "Developed Recreation" areas for comparatively intensive use levels, primarily for water-oriented

activities, including boat docks and other marina facilities, parking areas, picnic and campsites, conference centers, riding stables, golf courses and other uses. The project site is contained within one of these designated "Developed Recreation" areas. The project is consistent with the mission and policies of the *Master Plan for the EBRPD* (1997) as it would continue to provide the public with outdoor recreation opportunities. It also consistent with the lease agreement with the EBMUD, the EBMUD policy document, *Land Use Master Plan of the East Bay Municipal Utility District* (1970), and the *Land Use Plan for Lake Chabot Regional Park* adopted by EBRPD Board of Directors in 1977.

Potential Impact: No Impact

Mitigation: None required

4.11 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a, b) 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; and b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? The project site is located along the Lake Chabot shoreline at the marina, a small, relatively enclosed section of the lake. Project activities focus on replacement of dilapidated park and marine infrastructure. These proposed actions would not 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.

Potential Impact: No Impact

Mitigation: None required

4.12 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
NOISE -- Would the project result in:				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a), b), d) **Would the project result in exposure of persons to or generation of:** 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) excessive ground borne vibration or ground borne noise levels; or d) substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? In general, the noise levels in the park may be characterized as those of rural areas which typically range from 40 to 50 decibels on a 24-hour noise scale called the Community Noise Equivalent Levels (CNEL) (*Anthony Chabot Regional Park Land Use-Development Plan/Environmental Impact Report, State Clearinghouse No. SCH# 82072713*, February 21, 1984). Sensitive noise receptors within the project include recreational users (e.g., hikers; dog walkers and their dogs; equestrians; bicyclists; people fishing in boats along the shoreline or off the docks; picnickers); and wildlife (see Section 3.4 *Biological Resources*).

Certain activities (i.e., demolition and replacement of existing pavement and placement of rip rap) would generate temporary, periodic increases in ambient noise levels in the project vicinity. Additionally, significant ground vibrations and/or noise would be generated during periods when pilings for floating dock and gangway are being driven into bedrock. However, the generation of these construction related noise levels would be of short duration and would not result in a substantial permanent increase in ambient noise levels in the project vicinity. Moreover, the ridge along the easterly side of the park varies from 600 to 1,000 feet in elevation effectively shielding noise generated at the marina from the adjacent residential areas that are located more than 1,000 feet from the project site. Impacts to park visitors from the proposed construction activities associated with the site work would be minimized through temporary park closures in the area of work during

construction. Upon project completion, all construction noise would cease, all equipment and materials would be removed and noise levels would return to existing levels that now occur as part of ongoing park recreation and management activities. Implementation of Mitigation Measures **NOISE -1 and NOISE -2** would reduce the short-term impacts associated with site preparation to a less than significant level.

Potential Impact: Less than Significant with Mitigation Incorporated

Mitigation: See **NOISE -1** and **NOISE -2**

MITIGATION NOISE -1: Hours of work shall be Monday through Friday, 7 a.m. to 7 p.m. Requests to work off-hours, on weekends and District holidays shall be at the discretion of the District's Representative.

MITIGATION NOISE -2: Internal combustion engines used on the project site shall be equipped with a muffler type recommended by the manufacturer. Equipment and trucks shall utilize the best available noise-control techniques (e.g., engine enclosures, shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.

c) Would the project result in exposure of a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity as the proposed access and stabilization improvements would replace existing facilities supporting existing recreation uses. It can be expected that existing noise levels that now occur as part of ongoing park recreation and management activities would continue at current levels.

Potential Impact: No Impact

Mitigation: None required

e, f) 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; or 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?

The proposed project area is not located within a private airport land-use plan or within two miles of a public airport or public-use airport or the vicinity of a private airstrip. Therefore, implementation of the Plan would not expose people living, recreating or working in the project area to excessive noise levels associated with airport or aircraft operations.

Potential Impact: No impact

Mitigation: None required

4.13 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
POPULATION AND HOUSING -- Would the project:				
a) Induce 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the project induce 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)? The proposed project would involve replacement of dilapidated park and marine infrastructure including trails, a boat ramp, and floating docks, along with placement of approximately 285 linear feet of riprap armor to protect the trail and lake shoreline. The project area is wholly contained within the marina area of Lake Chabot Regional Park dedicated as regional park open space since 1952. No habitable improvements such as residential housing uses are permitted within the project area, nor are any habitable structures proposed that would add to localized daytime population growth.

Moreover, the project would not induce substantial population growth in the area because construction activities are limited in scope and short-term in duration so relatively few workers would be involved in completing the construction work. Long term management of the site would continue to be accomplished by existing EBRPD staff. Therefore, the proposed project would not directly result in population growth through the construction of new houses, nor indirectly add capacity-allowing population growth in the surrounding area.

Potential Impact: No impact

Mitigation: None required

b, c) Would the project: b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? The proposed project would involve access and bank stabilization improvements in land dedicated as regional park open space. As such, the proposed project would not displace existing housing, displace temporarily nor permanently persons residing in the area, nor require the construction of replacement housing. Thus, the project would not have any impact on population growth in the area.

Potential Impact: No impact

Mitigation: None required

4.14 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 of the public services:				
Fire protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the project result in substantial adverse physical impacts associated with fire protection, police protection, schools or parks? Implementation of the proposed project would not create a need for additional parks, schools or other public facilities. The level of services required for the proposed project is expected to remain relatively static. District rangers and police officers would continue to patrol and respond to emergencies within the park and lake via park vehicles, boats and helicopters.

Nonetheless, the activities required to complete the project improvements would require short term closures of the marina pathways, launch ramp and floating docks during the construction periods (anticipated to be July 1 to November 30). These actions would require noticing and additional monitoring by park staff as well as the contractor, to ensure that park visitors do not enter the construction area at times that could pose a safety risk. The adjacent marina café concession and near parking and picnic areas would remain open to the public during the construction of the project improvements.

As noted in Section 4.8-*Hazards and Hazardous Materials*, the use of heavy equipment near flammable vegetation presents an increased fire risk during the high fire hazard season that could result in additional demands on District fire response teams. However, any impact on services associated with the use of heavy equipment would be temporary and nothing in the project scope would contribute to the need for an increased level of public services on a permanent basis. Implementation of Mitigation Measures **SERV-1**, which requires public warnings, and **HAZ-2**, which requires readily available on-site fire suppression equipment (i.e., fire extinguishers), an on-site radio to facilitate the rapid dispatch of control crews and response equipment in case of a fire or other emergency, would reduce potential short-term project impacts to public services associated with public safety and heightened fire hazard risk to less than significant levels.

Potential Impact: Less than Significant with Fire Protection Mitigation Incorporated
Mitigation: See **SERV-1** and **HAZ-2**

MITIGATION SERV-1: District shall post warning signs to stay clear of work area during periods of construction. Contractor shall install temporary construction fencing around the work areas prior to each phase of construction and retain fencing until each phase of work is completed. Contractor shall comply with the fire safety requirements set forth in the Supplementary Conditions for the project.

4.15 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
RECREATION --				
a) Would the project 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) Would the project 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? The project would not alter current recreation use practices at the marina, though the facility improvements would correct existing substantial physical deterioration of the project site. Once construction is completed access to the lake shoreline will be improved such that more people with mobility restrictions will be able to access the shoreline and an existing ADA conforming fishing pier. Additionally, the improvements would improve access to the primary lake-related activities: boating and fishing, which would be a beneficial impact. These improvements could result in a minor increase in visitor use of an existing public marina on land that has been designated as regional parklands since 1952.

Potential Impact: Beneficial Impact
Mitigation: None required

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? The three-quarter acre project site is located at the southern end of the reservoir within the 350-acre Lake Chabot Regional Park. The park offers a variety of recreational facilities and opportunities to the general public with the marina serving as the gateway to Lake Chabot. Boating and fishing are the primary lake-related activities.

The marina area facilities include fishing piers, trails for bicyclists and pedestrians, and irrigated meadows surrounded by group and family picnic areas. Boat use is limited to small electric rowboats, paddleboats and canoes that are available to the public for rent on an hourly basis, a sightseeing launch that provides boat tours of the lake and gasoline powered boats that are used by staff to support boating operations. Personal, non-motorized watercraft that pass the District quagga mussel (*Dreissena rostriformis bugensis*) inspection are also allowed on the lake.

Fishing requires a current California Fishing License with stamps and an EBRPD Daily Fishing Access Permit for all anglers aged 16 and older. California Fish and Game regulations apply. A café concession that sells food and fishing licenses and EBRPD permits is open year-round. Fishing takes place along the three mile long east and west shorelines, off the fishing docks, from personal watercraft and from boats that are available for rental. Lake Chabot is stocked with rainbow trout from September through May and catfish during the summer months. One of the popular lakeside events is the annual spring fishing derby. Fish may be cleaned only at the cleaning station along the walk near the parking lot. Fishing is not allowed in the Chabot marina area in order to

protect spawning fish and to minimize interference with boaters moving in and out of the marina area. Swimming is not permitted in Lake Chabot.

Two picnic areas are located near the marina; one area has a lake views, the other, a reservable, group picnic area with ADA compliant facilities serving 35 picnickers is located closer to the lake, concession and restrooms.

Regional parklands linking to Lake Chabot Regional Park via the East Bay Skyline National Recreation Trail include Redwood, Roberts, Silbey, Huckleberry, Tilden and Wildcat Regional Parks to the north. Overall these parklands provide over 12,800 acres of contiguous recreational open space serving this region.

The Plan proposes to: realign and reinforce an existing trail that is being undermined by bank erosion to improve public access to an ADA accessible fishing dock; improve an existing launch ramp; replace a floating dock and gangway for launching non-motorized boats; and improve fishing stocking operations to support visitor fishing opportunities.

Short-term Disruptions. While the project does not propose overall closure of the entire park, recreation activity in the marina area would be disrupted to protect public from construction related activities and impacts (See Sections 4.3 Air Quality, 4.8 Hazards and Hazardous Materials, and 4.12 Noise). As a result, access to the West Trail and fishing pier and launch area would be closed during construction. The overflow parking lot would also be closed and used as a construction staging area.

Long term Recreation Impacts. Once construction is completed access to the lake shoreline will be improved such that more people with mobility restrictions will be able to access the shoreline and an existing ADA conforming fishing pier. Additionally, the improvements would improve access to the lake for the primary lake-related activities; boating and fishing, which would be a beneficial impact.

Implementation of Mitigation **REC-1** would reduce potential short-term project impacts to public recreation and public safety to less than significant levels.

Potential Impact: Less than Significant with Mitigation Incorporated

Mitigation: See **REC-1**

MITIGATION REC-1: The District shall develop a noticing and outreach component to inform the public about scheduled closures. Noticing and outreach shall include the following components:

- The District shall post notices at key access points in Lake Chabot Regional Park that detail the proposed project's construction schedule, including a map of the project site, and the timing and duration of planned closures
- The District shall post a large visible sign in proximity to the project site warning the public of ongoing construction activities and disruption of recreational access to the marina
- The reservation staff shall be informed of the project and briefed as to potential construction related disruptions (e.g., added noise and dust in a normally tranquil setting, occasional traffic disruptions, potential reduction in available parking as part of the parking area would be occupied by contractor employees)
- The District shall provide notice of the project on its website.

4.16 TRANSPORTATION/TRAFFIC

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
TRANSPORTATION/TRAFFIC -- Would the project:				
a) Exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a), d) a) Exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit or d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? I-580 freeway serves Castro Valley, San Leandro, Hayward and Oakland. Motorized access to the park site is available from I-580 at Castro Valley and from San Leandro. From Castro Valley westbound drivers take the Strobridge Avenue exit then turn right on Strobridge, right on Castro Valley Boulevard, and left on Lake Chabot Road. The Lake Chabot Marina is about two miles ahead on the right. Eastbound visitors exit at Redwood Road and go left, go left at Castro Valley Boulevard, right at Lake Chabot Road, and follow the directions above. From I-580 in San Leandro, visitors exit at Fairmont Drive and go east (uphill). The marina entrance is to the left at the bottom of the hill. Lake Chabot Road borders the park for a distance of about 1.7 miles. The 0.4-mile segment southerly of the Fairmont Drive intersection is a paved, four-lane, divided roadway with a parking lane, curbs and sidewalks on each side. The portion of this road northerly of Fairmont Drive is a paved, two-lane, curving mountain road with reduced sight-distances and narrow shoulders for portions of its length.

Serving the marina complex (including the project site) is paved parking for 168 vehicles including four handicapped stalls and one 15 minute loading zone. In addition, there are two overflow gravel parking lots; one

with 39 spaces and a larger one with 148 spaces. On street parking can accommodate approximately 250 cars. Parking reaches capacity routinely during peak season weekend days. The overflow parking would be used for project construction staging and would not be able for visitor use during construction.

Short-term Disruptions. All activities associated with the project would occur within the boundaries of the Lake Chabot Regional Park. Therefore, while implementation of the project may result in minor internal circulation impacts while equipment and personnel are transported to and from the site, these disruptions would be minor and short term in nature.

During construction the use of heavy equipment would require closure of the project site to protect public safety (See Sections 4.3 *Air Quality*, 4.8 *Hazards and Hazardous Materials*, and 4.12 *Noise*). This closure could also result some limited restrictions to visitors traveling from the parking lot to the various recreation facilities within the within the immediate park marina area as construction vehicles and materials are moved between the construction staging and construction work area. It would also require closure of the overflow parking to visitor use as this parking area would be used for construction staging. Temporary closure of the staging area could have a short term adverse impact on parking availability during peak visitor weekends.

Long Term Impacts. Over the long term the project does not include any proposals to change the design of roadways, intersections or parking areas. Nor does it include the construction of any motorized vehicular infrastructure. The alignment of the existing ten-foot-wide asphalt trails would be modified slightly to meet ADA standards. The new dock would improve existing lake access for recreation purposes. As a park access and bank stabilization project involving the replacement of existing facilities the proposed construction activities do not include any proposals to construct or alter the roadway or parking infrastructure. Thus, no increase in the number of visitors at the park or related increase in the vehicular trips and traffic would be anticipated.

Therefore, the project would not affect the LOS of any intersections in the project vicinity nor existing and/or planned system capacity for bus ridership. Nor would the project eliminate or adversely affect an existing bikeway facility in a way that would discourage bike use or safety; interfere with the implementation of a proposed bikeway; or result in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts. As the project focus is on replacing and rehabilitating infrastructure at an existing marina the project would not result in a change in parking demand for typical day use conditions over the long term. The project would beneficially affect the existing pedestrian facilities at the marina resulting in safer passage with less mobility restrictions.

Potential Impact: Less than Significant

Mitigation: None required

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? As described above, work associated with the proposed project would not restrict access to or block any public road as all activities associated with the project would occur within the existing marina area of the Lake Chabot Regional Park. Therefore, the impact on congestion resulting from project-generated vehicles on normal traffic on the Interstates or surface roads would be minimal and have no impact on the acceptable Level of Service for this area.

Potential Impact: No Impact

Mitigation: None required

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? Implementation of the project would not result in a change in air traffic patterns as all work take place on the ground and the proposed project area is not located within a

private airport land-use plan or within two miles of a public airport or public-use airport or the vicinity of a private airstrip.

Potential Impact: No Impact

Mitigation: None required

e) Result in inadequate emergency access? Implementation of the project would not alter roads or other infrastructure used or identified as emergency access routes. Work associated with the proposed project would not restrict access to or block any public road as all activities associated with the project would occur within the marina area of the Lake Chabot Regional Park. Additionally, most areas within the park would remain open to the public during project activities, with no closures of areas identified as emergency access routes. While there could be intermittent and temporary traffic interruptions and restrictions on an overflow parking area relating to transporting and storing construction equipment and supplies, these disruptions would be minor and short term in nature.

Potential Impact: No Impact

Mitigation: None required

f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? Bicycle and pedestrian access to the project area is from one of two existing trails; West Shore Trail and East Shore Trail that connect to the parking lot. At the site there are fishing piers including one with access for the disabled. There are approximately 37.5 miles of service roads within Lake Chabot and the immediately adjacent Anthony Chabot Regional Parks used for maintenance and fire protection that also serve as hiking and equestrian trails. All of the trails are unpaved except for the 4.5 mile- Lakeside and Lakeview Trails, which are designated bicycle trails, and the 1.5 mile-long road serving Lost Ridge and Hawk Ridge Group Camps. In addition to the service roads, there are several miles of hiking and equestrian trails unsuitable for motorized vehicles. These are found in Grass Canyon and the northeast shore of Lake Chabot.

The closest bus service is from line 48 at Lake Chabot Road and Somerset Avenue which is located approximately one mile from the park entrance. Bus service is on one hour intervals weekdays only. Bikes are accommodated on front carry racks.

The project activities would not conflict with any adopted policies, plans, or programs that support alternative transportation including existing and/or planned system capacity for bus ridership; existing bikeway facilities; or interfere with the implementation of a proposed bikeway; resulting in unsafe conditions for bicyclists, including unsafe bicycle/pedestrian or bicycle/motor vehicle conflicts. The project would benefit the existing pedestrian facilities at the marina resulting in safer passage with less mobility restrictions.

Potential Impact: No Impact

Mitigation: None required.

4.17 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a), b), e) a) **Would the project 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;** or e) **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?** Sewage from the Chabot Marina is pumped into the Castro Valley Sanitation District system through a separate line. The marina and the Castro Valley Sanitation District are within jurisdiction of the San Francisco Bay Area Regional Water Quality Control Board (RWQCB). Implementation of the project would not result in the construction of any new permanent structures that would generate wastewater or require wastewater treatment adding to the capacity of the Castro Valley Sanitation District or any other wastewater treatment provider. Nor, would the project require irrigation or construction of facilities or uses that would require large quantities of water. Therefore, implementation of the project would not exceed wastewater treatment requirements of the San Francisco Bay Area RWQCB or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities.

Potential Impact: No impact

Mitigation: None required

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? The project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities.

Potential Impact: No Impact
Mitigation: None required

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? The proposed project would not require new or expanded water supply entitlements, or result in any new demands on existing water sources. Therefore, the proposed project would have no impact on water entitlements or supplies.

Potential Impact: No impact
Mitigation: None required

f), g) f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; and g) comply with federal, state, and local statutes and regulations related to solid waste? The long term volume of waste generated from existing recreation uses are expected to remain static as visitor use is not anticipated to expand as a result of the project.

Over the short term waste materials generated as part of the construction activities would consist primarily of demolition, excavation, and grubbing related waste. Demolition waste would include broken asphalt and concrete, wood debris, small amounts of scrap steel and plastics. In addition, there would be vegetation waste associated with clearing and grubbing and tree removal as part of the site preparation. Demolition and grubbing related wastes would account for approximately 1,450 cubic yards of materials. These materials would either be loaded directly onto dump trucks for off-site disposal or temporarily stockpiled in one of the designated stockpiling areas for later disposal.

Materials collected and removed under the contract would become the property of the contractor upon collection and would be disposed of off site. District contractors typically dispose of green wastes at area-wide landfills. Alameda County's construction and demolition (C&D) ordinance (effective July 1, 2003) requires at least seventy-five percent of the asphalt, concrete, and earth debris (e.g., debris includes trees, stumps, earth, and rock from the clearing of construction sites) generated by the project to be diverted from landfill via reuse or recycling (Chapter 4.38 Construction Debris Management and Green Building Practices).

Alameda County's Altamont Landfill and Resource Recovery vendor located at 10840 Altamont Pass Road in Livermore CA 94550 handles asphalt, concrete, concrete with rebar, dirt / clean fill, dirt with gravel and rock, rock / gravel: clean, wood scraps: untreated, wood: treated / painted, scrap metal, grass clippings, leaves, and wood debris: untreated. As of 2000 Alameda County's Altamont Landfill and Resource Recovery reported an estimated remaining capacity of 45,720 million cubic yards (73.7 percent of total landfill capacity) with an estimated closure date of Jan 2029. Additionally, Vasco Road Sanitary Landfill, 4001 North Vasco Road Livermore CA, 94550 has a total estimated permitted capacity of 32,970,000 cubic yards of which approximately 23,099,296 cubic yards or 70.1 percent has been used leaving a remaining estimated capacity of 9,870,704 cubic yards or 29.9 percent This estimate of remaining capacities indicates that available capacities are sufficiently high to accommodate the minor disposal needs of the District's contractors when removing materials, other than green waste, that could be required to support the project. (Sources: Alameda Landfill and Resource Recovery Facility & California Integrated Waste Management Board web sites Accessed 26 October 2010)

Waste materials resulting from the proposed project construction would consist primarily of trees that would be mulched; concrete and asphaltic concrete which could be ground up for reuse (off-site at a recycling center as there isn't the room to work on site), as well as landfill materials consisting of painted wood fencing, and 80

concrete embedded pressure treated wood fence posts and concrete post footings which would be deposited to the landfill. Saturated soil that would be removed to accommodate the riprap toe trench could be reused as fill once the material has dried. Thus, as most of the materials from the site would be recycled any potential impacts to landfill capacity resulting from implementation of the project would be less than significant.

Implementation of Mitigations **UTL-1** and **UTL-2** would ensure that the Contractor is acting in accordance with federal, state, and local statutes and regulations.

Potential Impact: Less than Significant with Mitigation Incorporated

Mitigation: See **UTL-1** and **UTL-2**

MITIGATION UTL-1: All broken asphalt and concrete, wood debris, small amounts of scrap steel, plastics and vegetation waste associated with clearing and grubbing and tree removal shall be removed and disposed of offsite by the contractor in a legal manner at a site approved by the District. The contractor shall be responsible for making all arrangements for the disposal of such materials in a manner that shall comply with federal, state, and local statutes and regulations pertaining to solid and green waste.

MITIGATION UTL-1: All cut trees and associated slash and woody debris (>1.5" diameter or 3' length), soil and debris shall be removed and disposed of offsite by the contractor in a legal manner at a site approved by the District. The contractor shall be responsible for making all arrangements for the disposal of such materials in a manner that shall comply with federal, state, and local statutes and regulations pertaining to solid waste and Sudden Oak Death (SOD) and Light Brown Apple Moth (LBAM) quarantine compliance agreements.

4.18 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE				
a) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) 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? Potentially significant adverse impacts to the natural environment resulting from the proposed project and related activities were evaluated. The proposed project would involve grading activities that could potentially affect unknown prehistoric resources; however, with the implementation of the previously mentioned mitigation measures, impacts to unknown cultural resources would be reduced to a less than significant level. With full implementation of all the aforementioned mitigation measures, potential adverse project-related impacts would be reduced to a less than significant level, lake water quality would be improved and recreation users would benefit. **Less than Significant with Mitigation.**

b) 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 purpose of the *Public Access and Stabilization Project for Lake Chabot Marina* is to stabilize an eroding bank that is threatening existing shoreline access and to improve existing public access to the lake for recreation activities. Therefore, this plan would have beneficial impacts for the Lake Chabot Marina. No additional projects other than routine maintenance are planned for the proposed project area in the foreseeable future. Therefore, the project would not have impacts that are cumulatively considerable. **No Impact.**

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? Environmental effects from the proposed project would generally not

have substantial adverse effects on humans. However, possible impacts from construction accidents, noise, and other safety hazards do exist. With the incorporation and implementation of the proposed mitigation measures, impacts to humans from the proposed project would be reduced to less than significant. **Less than Significant with Mitigation.**

5.0 REPORT PREPARATION

5.1 REPORT PREPARERS

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5.2 ACRONYMS

ADA	Americans with Disabilities Act
BAAQMD	Bay Area Air Quality Management District
BMPs	Best Management Practices
BO	Biological Opinion
CASQA	California Stormwater Association
CO ₂	Carbon Dioxide
CCWC	Contra Costa Water Company
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CH ₄	Methane
DBH	Diameter at Breast Height
EBMUD	East Bay Municipal Water District
EBRPD	East Bay Regional Park District
GHGs	Greenhouse Gases
IS	Initial Study
MEP	Maximum Extent Practicable
MND	Mitigated Negative Declaration
N ₂ O	Nitrous Oxide
RWQCB	Regional Water Quality Control Board
SRA	Shaded Riverine Aquatic
USACE	US Army Corps of Engineers

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