East Bay Regional Park District

Regional Maintenance Activities
Alameda and Contra Costa Counties

ATTACHMENT A

Activities that Constitute Routine Maintenance in Waterways, Ponds and Lakes in the East Bay Regional Park District Watersheds

ATTACHMENT A

ACTIVITIES THAT CONSTITUTE ROUTINE MAINTENANCE IN WATERWAYS, PONDS AND LAKES IN THE EAST BAY REGIONAL PARK DISTRICT WATERSHEDS

The following activities, with their conditional requirements, are accepted as the routine maintenance activities that may be conducted by East Bay Regional Park District (EBRPD) within all streams, channels, catchment basins, ponds, and lakes within their Alameda and Contra Costa Counties wastersheds.

1. Routine removal of the minimum vegetation necessary to insure the proper functioning and operation of stream flow measuring stations and existing water control facilities or structures necessary for public health, safety and benefit, provided that heavy equipment shall not be used in the streambed unless dry conditions are present and trees over 4 inches diameter at breast height (dbh) will not be removed.

2. Planting of riparian vegetation by hand or with rubber-tired backhoe along gravel bars and banks of EBRPD lakes and banks of their tributaries, is subject to the following conditions: (a) equipment shall not be operated in standing or flowing water; (b) trenches shall be excavated, planted and backfilled on the same day; (c) fueling shall not take place in the stream channels, on lake beds, nor within 100 feet of open water, except on levee repairs where moving heavy equipment will cause further damage to the levee and create additional soil erosion potential; and (d) access shall be by existing access ramps only.

3. The following sites may be dredged as needed to remove accumulated sediment and debris. Dredging shall be done with a crawler excavator and limited to 200 cubic yards annually per site with less than 0.05 acre of wetland or waterbody impact for each single dredging activity. Erosion, sediment and turbidity control measures and procedures shall be implemented to minimize siltation and turbidity downstream of the siltation basins during dredging operations. EBRPD shall not cause suspended solids in the water column downstream of the siltation basins to increase more than 10% over background levels. Background level is equal to the turbidity of the stream immediately upstream of the siltation basin. Sediment that is removed shall be hauled away to a landfill or other appropriate upland site for disposal, or re-used as allowed in the Order. Removal of riparian vegetation shall be minimized during dredging operations. Routinely dredged sites include:

    a. Lake Temescal Regional Park Siltation Basins located near the confluence of Caldecott Creek (1) and Temescal Creek (2);

    b. Tilden Nature Area man-made ecological interpretive ponds (4) which are fed with piped-in water (EBMUD);

c. Tilden Nature Area siltation basins (2), located in Wildcat Creek, specifically installed to protect Jewel Lake;

d. Tilden Regional Park Golf Course siltation basin, located in Wildcat Creek specifically installed to protect Lake Anza;

e. Lake Chabot Regional Park marina sediment basin located at the confluence of a small ephemeral stream and the paved concrete boat launch

f. Miller Knox Regional Park engineered pond, which is fed with pumped-in bay water;

g. Concrete paved boat launches at Lake Del Valle;

4. Removal of woody and herbaceous vegetation with hand tools or hand power tools in the stream bottom in that portion of the channel from the toe of one bank to the toe of the opposite bank. Only that vegetation representing a bank erosion and/or flood threat shall be removed. All such removal shall be in the dry stream channel when there is neither flowing nor standing water at the removal sites. No trees over 4 inches diameter at breast height (dbh) will be removed.

5. Removal of fallen trees, branches, rubbish, garbage and associated debris from the stream channel, banks and culverts. This is allowed only when material represents a bank erosion and/or flood threat. Wherever reasonably possible, this activity shall be restricted to and/or staged from the dry streambanks and upland areas to keep in-stream disturbance and turbidity to a minimum.

6. Removal of non-native, invasive vegetation (Arundo, tree tobacco, castor bean, pampas grass, eucalyptus, acacia, broom, etc.)

7. Repair or replacement of damaged or failed sections of rock riprap, gabion, geocell, sacked concrete, concrete wall and/or cribwall bank revetments to maintain bank stabilization. These activities shall be confined to the damaged or failed sections and immediate adjacent bank area (not to exceed an additional 30 feet total) affected by the damage or failure. Routine revetment repair or replacement shall be conducted only when the channel is dry and only during the period of April 15 to October 31. Riparian trees shall be protected from damage to the greatest extent possible during revetment repair and replacement. Repair or replacement will utilize less bank hardening materials, and/or more bio-technical materials, as much as possible. To the maximum extent practical, repairs shall not include new placement of gabions, geocells, sacked concrete or concrete walls.

8. Use of biotechnical bank stabilization techniques to stabilize creek banks that were not previously armored. Bank stabilization involves the repair and

stabilization of small creek banks and streambeds when a weakened, unstable, or failing bank causes or threatens damage to an adjacent property, generates erosion that increases downstream sediment yields, impacts riparian habitat and/or other natural resource values, increases the flood hazard, threatens public safety, or impairs roads, transportation, or access.

9. Routine maintenance or replacement of culverts in stream channels associated with park trails and access roads and installation of energy dissipaters, headwalls, and tailwalls on existing and replacement culverts. These activities shall be conducted only when the channel is dry and only during the period of April 15 to October 31. The replacement of other forms of stream crossings with culverts is not authorized by the WDRs for maintenance activities.

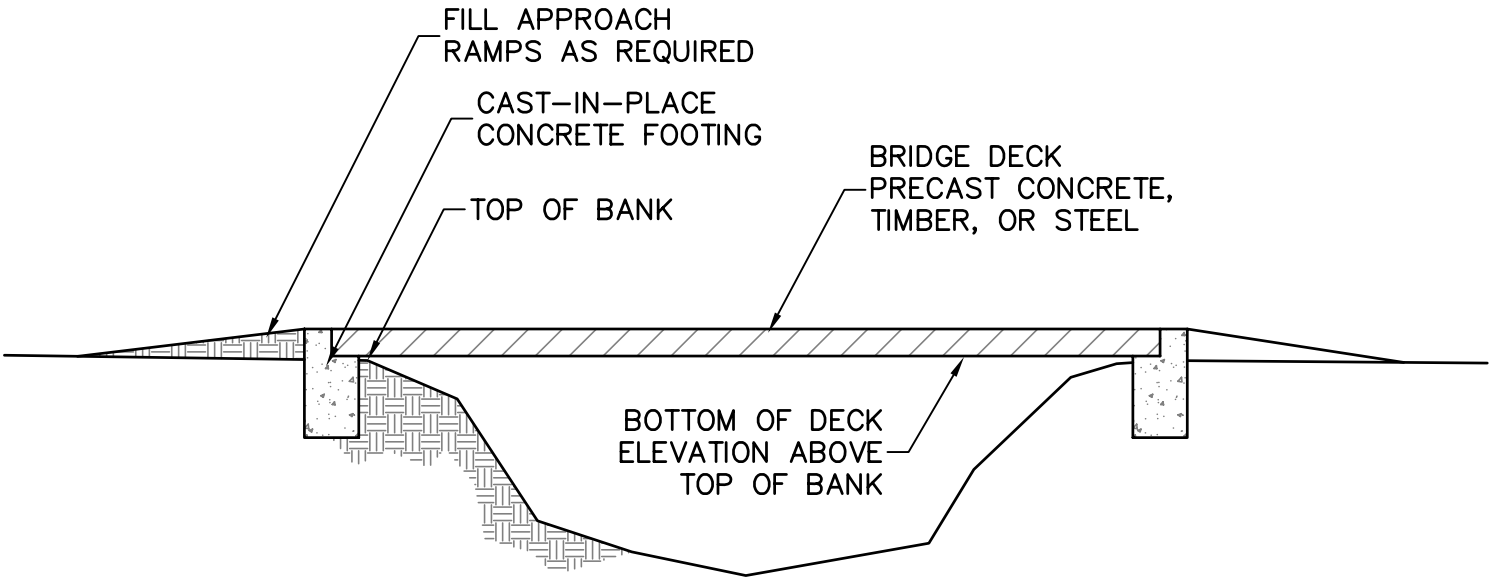
10. Annual swim beach sand recapture and maintenance. These activities shall occur only in beach areas above lake level. Sand shall be re-spread across the beach area above the water line using a bulldozer.

11. Maintenance of existing bridges and installation of clear span bridges.

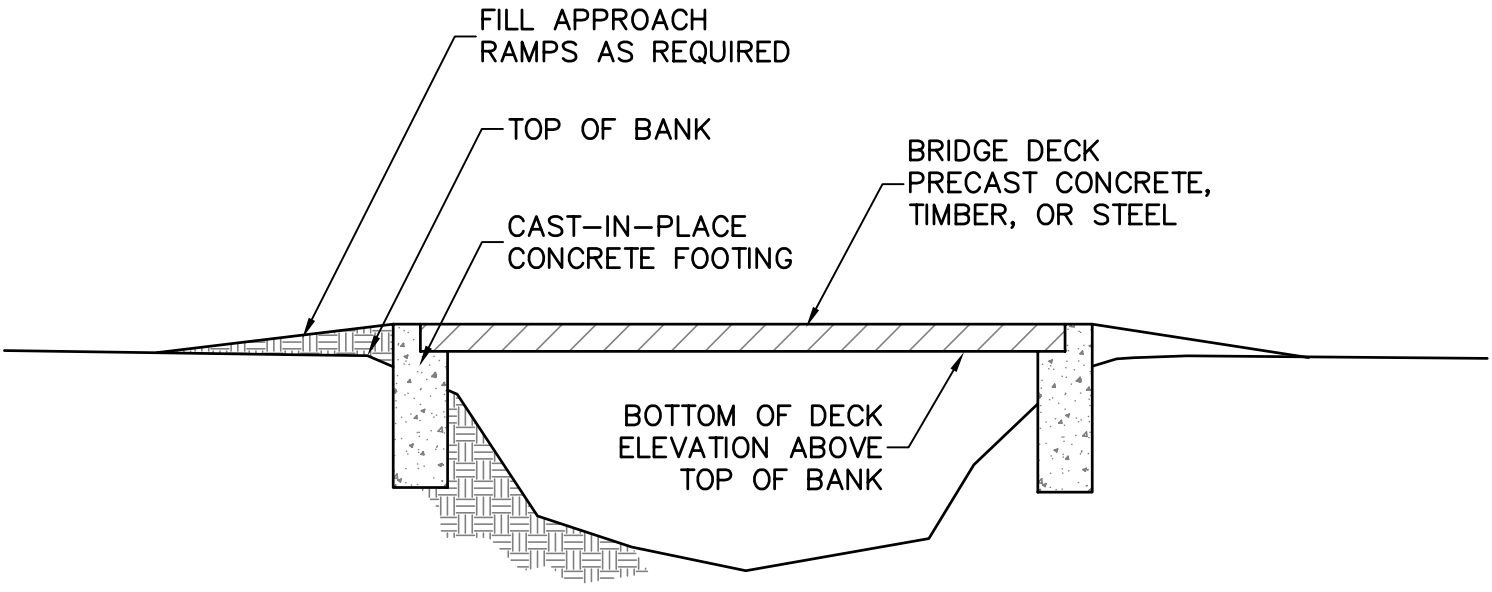
12. Maintenance of existing stream fords and installation of articulated concrete blocks for small stream crossings.

13. Routine maintenance of existing piers and docks to repair broken or rotting members. May include in-kind replacement of abutments, piles, decking, ramps, gangways, and dock structures, not to exceed existing footprints.

ATTACHMENT B



CLEAR–SPAN BRIDGE – FOOTINGS OUTSIDE OF TOP OF BANK



CLEAR–SPAN BRIDGE – FOOTINGS INSIDE OF TOP OF BANK

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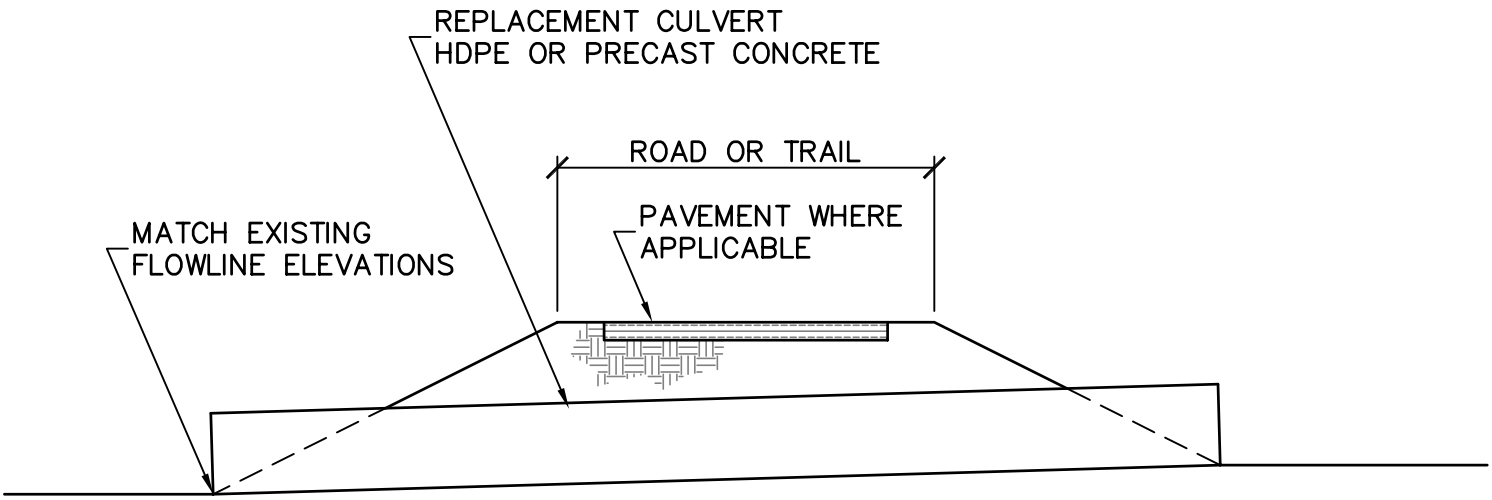
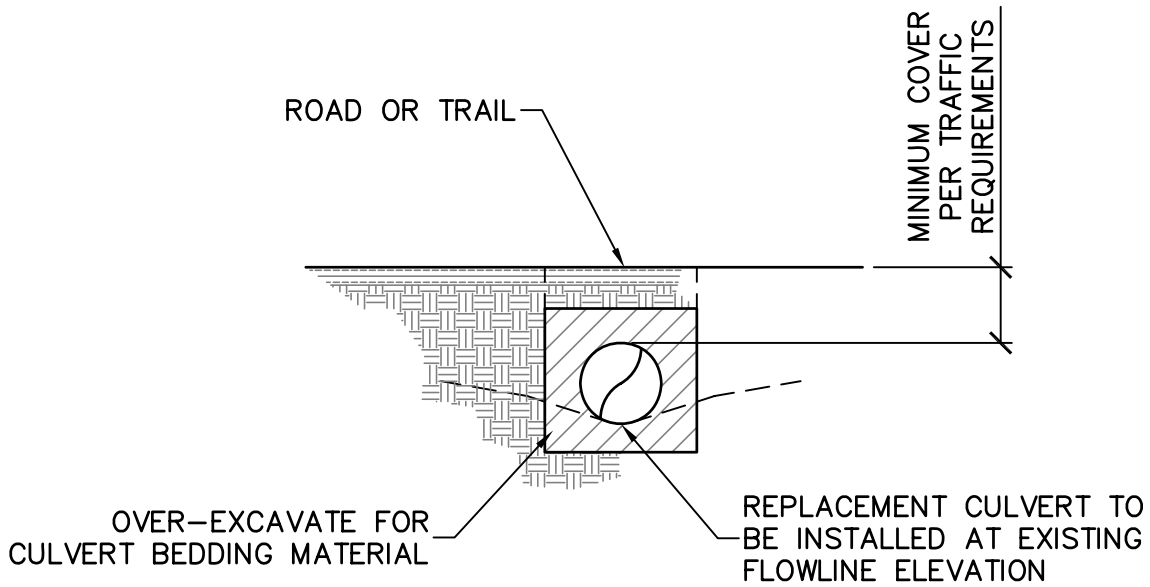
	INSTALLATION OF CLEAR-SPAN BRIDGES	SCALE NONE	DRAWING NO.	SHEET NO. 1
	ROUTINE MAINTENANCE ACTIVITIES - CONCEPTUAL SKETCHES	DATE MARCH 2010		OF
	PROJECT NO. CONTRACT NO.	**EAST BAY REGIONAL PARK DISTRICT**		



CULVERT – LONGITUDINAL SECTION



CULVERT – TRANSVERSE SECTION

CULVERT REPLACEMENT		SCALE NONE	DRAWING NO.	SHEET NO. 2
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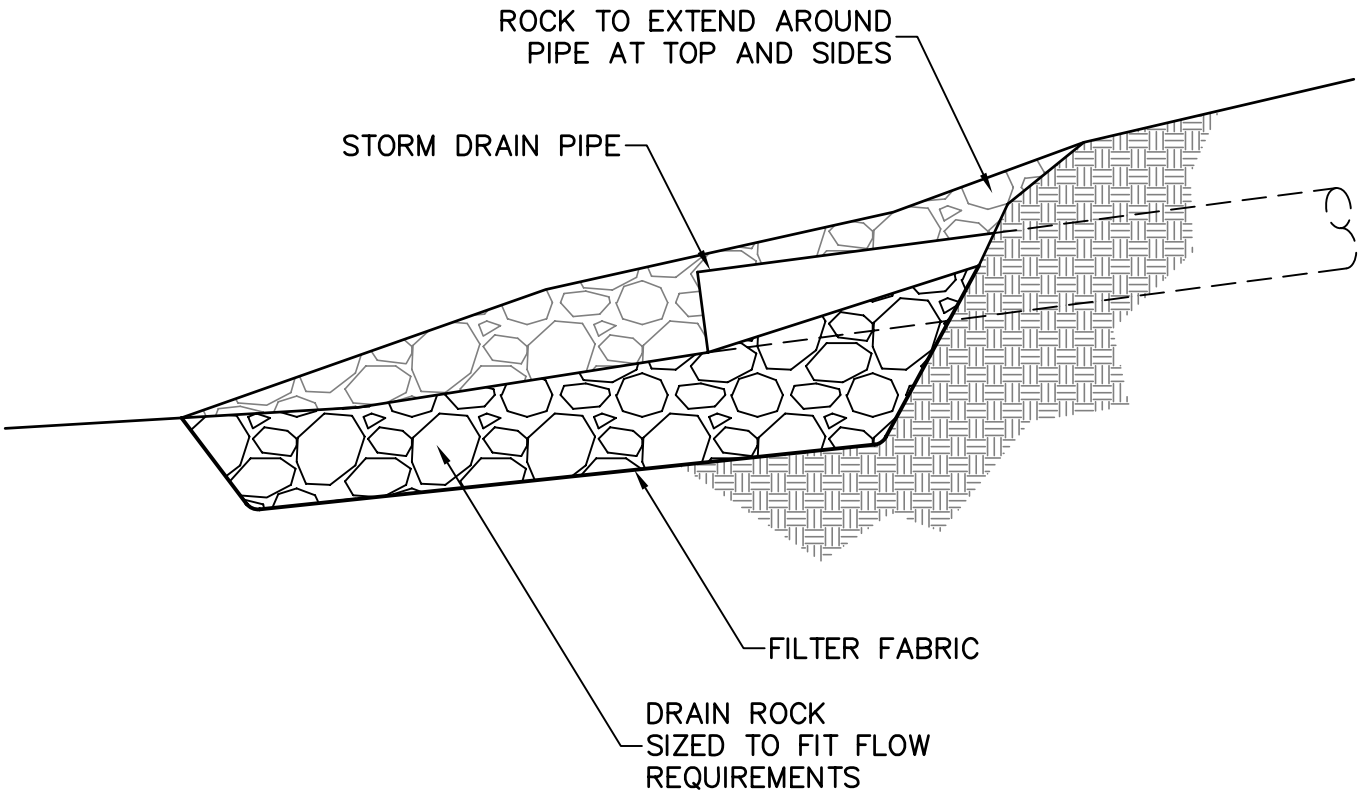
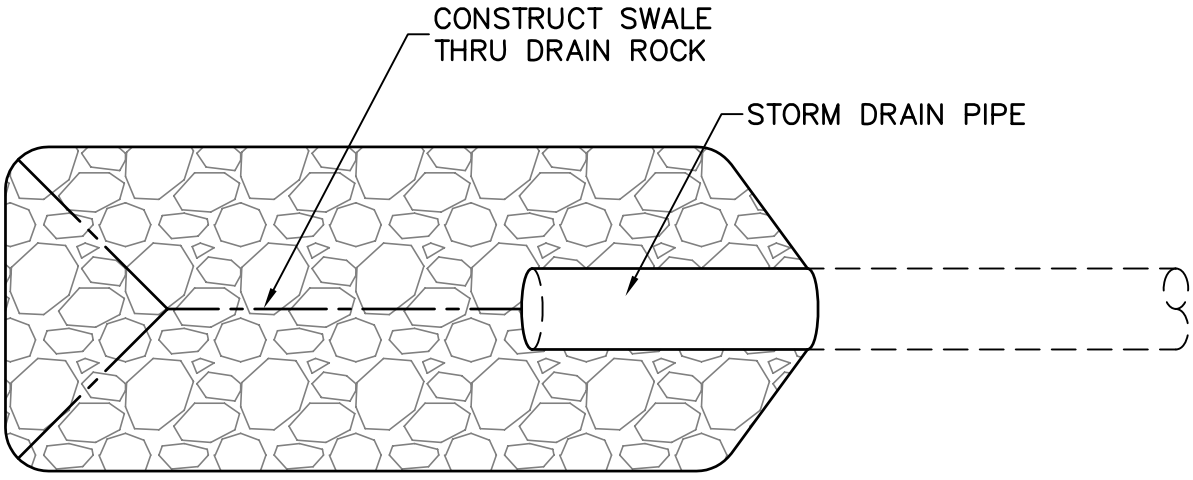
PROJECT NO.	CONTRACT NO.	**EAST BAY REGIONAL PARK DISTRICT**		

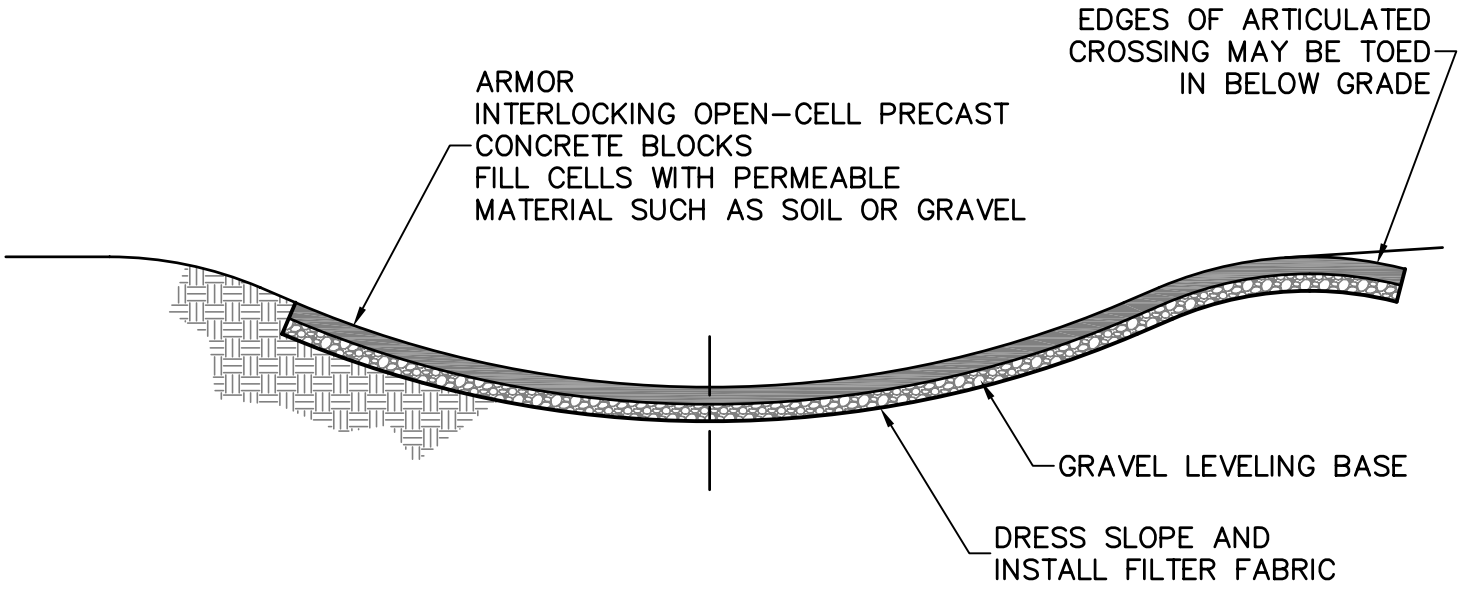


ENERGY DISSIPATER – LONGITUDINAL SECTION

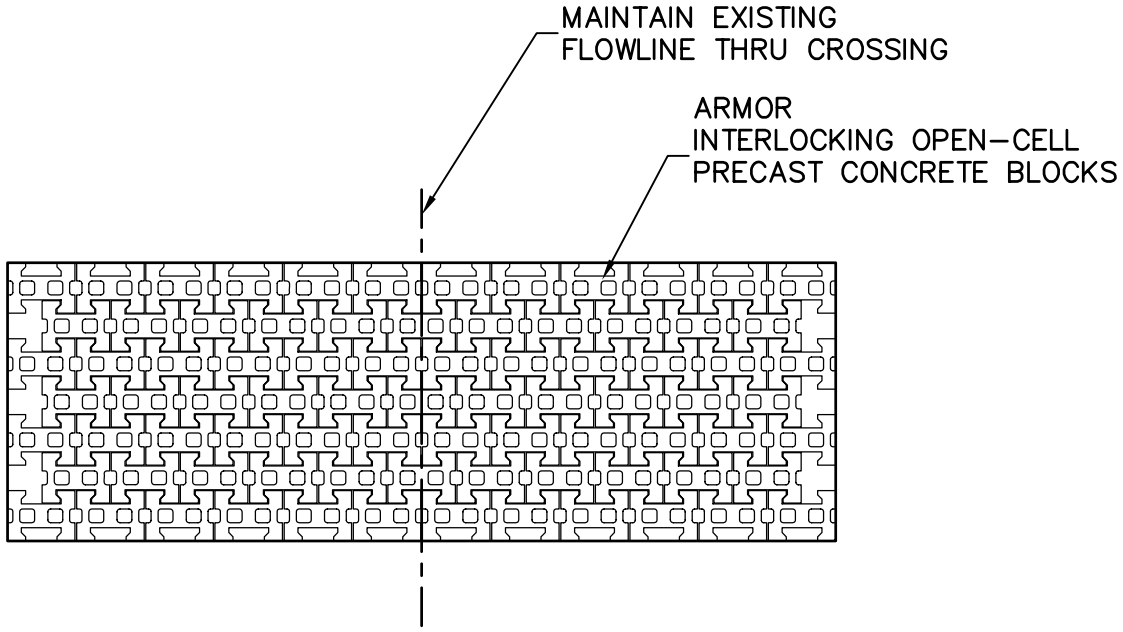


ENERGY DISSIPATER – PLAN VIEW

ENERGY DISSIPATERS	SCALE NONE	DRAWING NO.	SHEET NO. 3
ROUTINE MAINTENANCE ACTIVITIES - CONCEPTUAL SKETCHES	DATE MARCH 2010		OF
PROJECT NO. CONTRACT NO.	**EAST BAY REGIONAL PARK DISTRICT**		

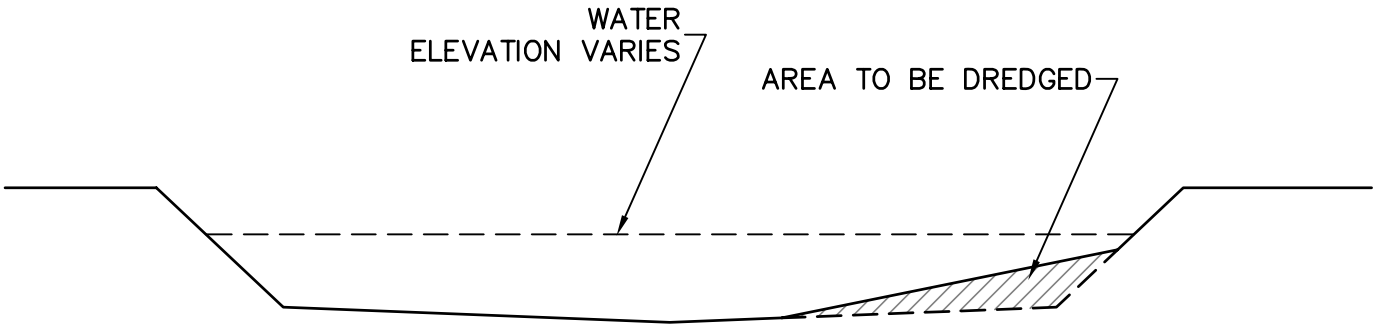


ARTICULATED CROSSING – LONGITUDINAL SECTION



ARTICULATED CROSSING – PLAN VIEW

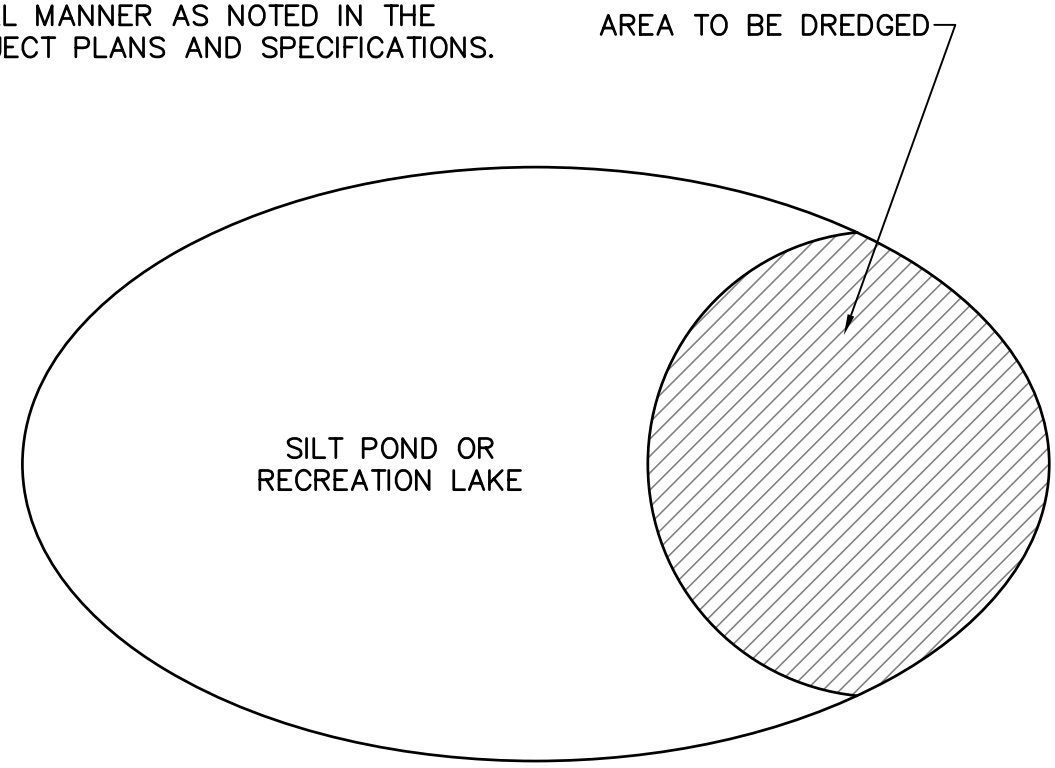
ARTICULATED CROSSING	SCALE NONE	DRAWING NO.	SHEET NO. 4	
ROUTINE MAINTENANCE ACTIVITIES - CONCEPTUAL SKETCHES	DATE MARCH 2010		OF	
PROJECT NO. CONTRACT NO.	**EAST BAY REGIONAL PARK DISTRICT**			



SILT DREDGING – SECTION

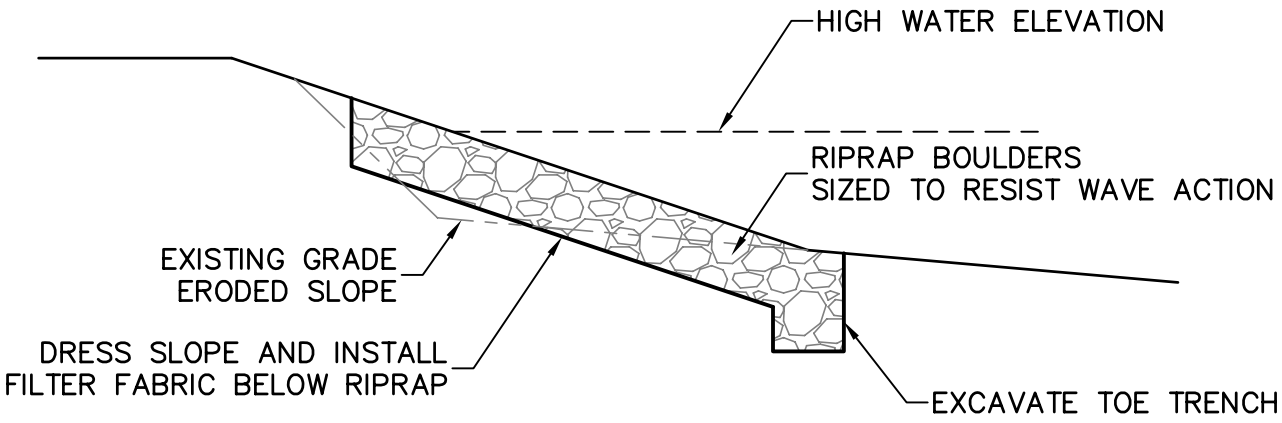
NOTES

1. ONLY DREDGE AREA NOTED ON PLANS.
2. DO NOT REMOVE MORE MATERIAL THAN ALLOWED BY PERMIT.
3. DISPOSE OF DREDGED MATERIAL IN A LEGAL MANNER AS NOTED IN THE PROJECT PLANS AND SPECIFICATIONS.

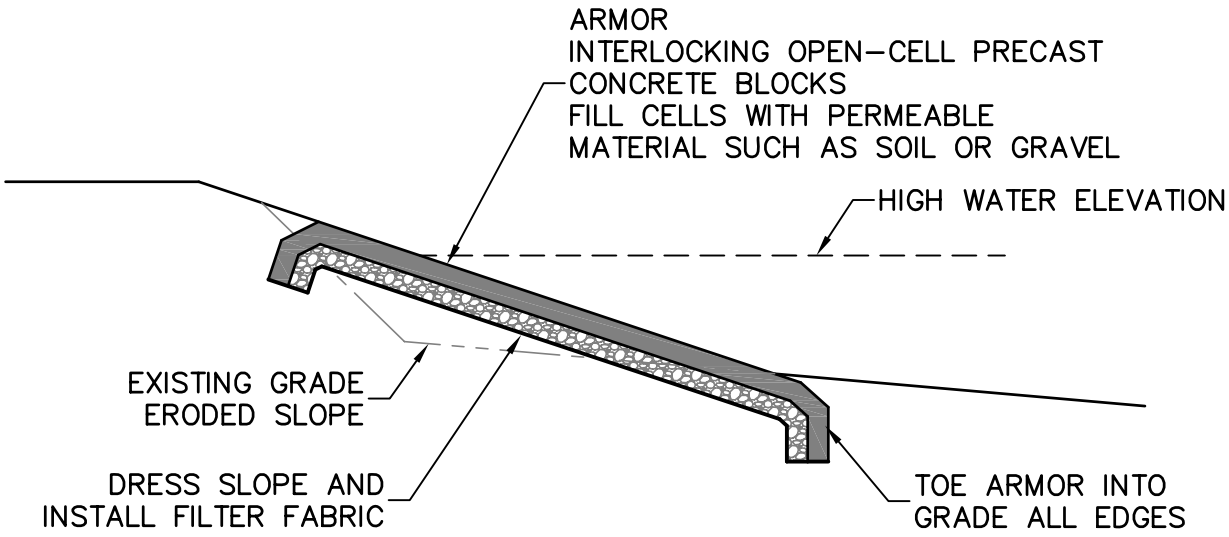


SILT DREDGING – PLAN VIEW

DREDGING OF PONDS OR RECREATION LAKES	SCALE NONE	DRAWING NO.	SHEET NO. 5
ROUTINE MAINTENANCE ACTIVITIES - CONCEPTUAL SKETCHES	DATE MARCH 2010		OF
PROJECT NO. CONTRACT NO.	**EAST BAY REGIONAL PARK DISTRICT**		

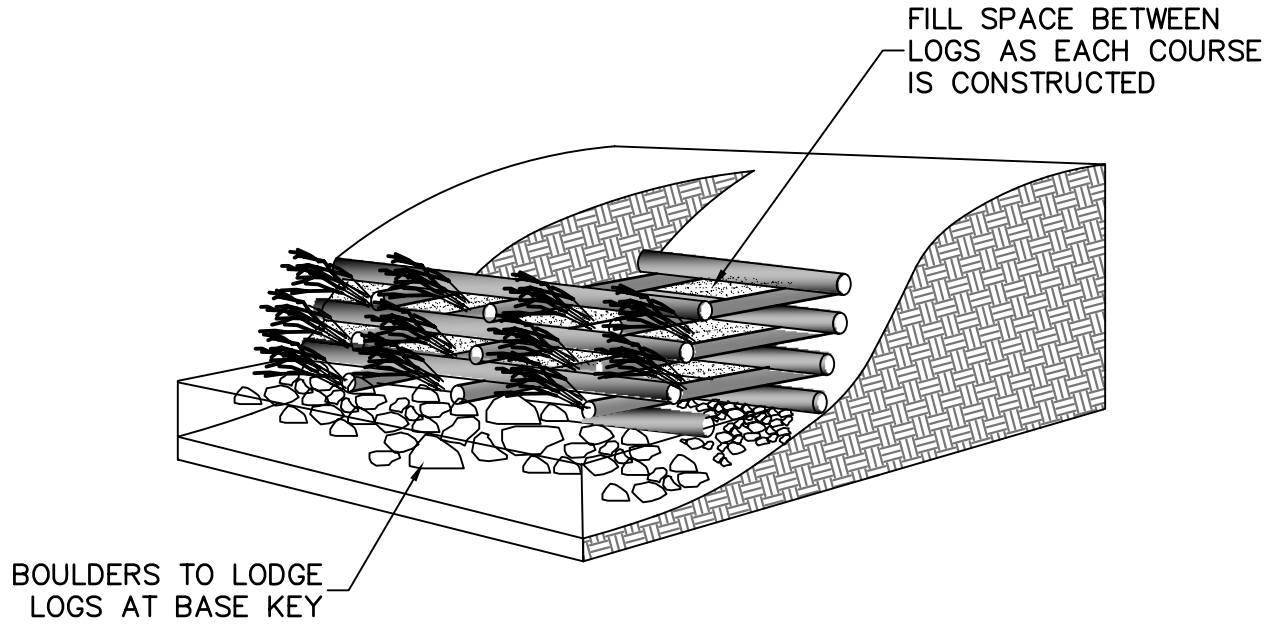


RIPRAP – SECTION

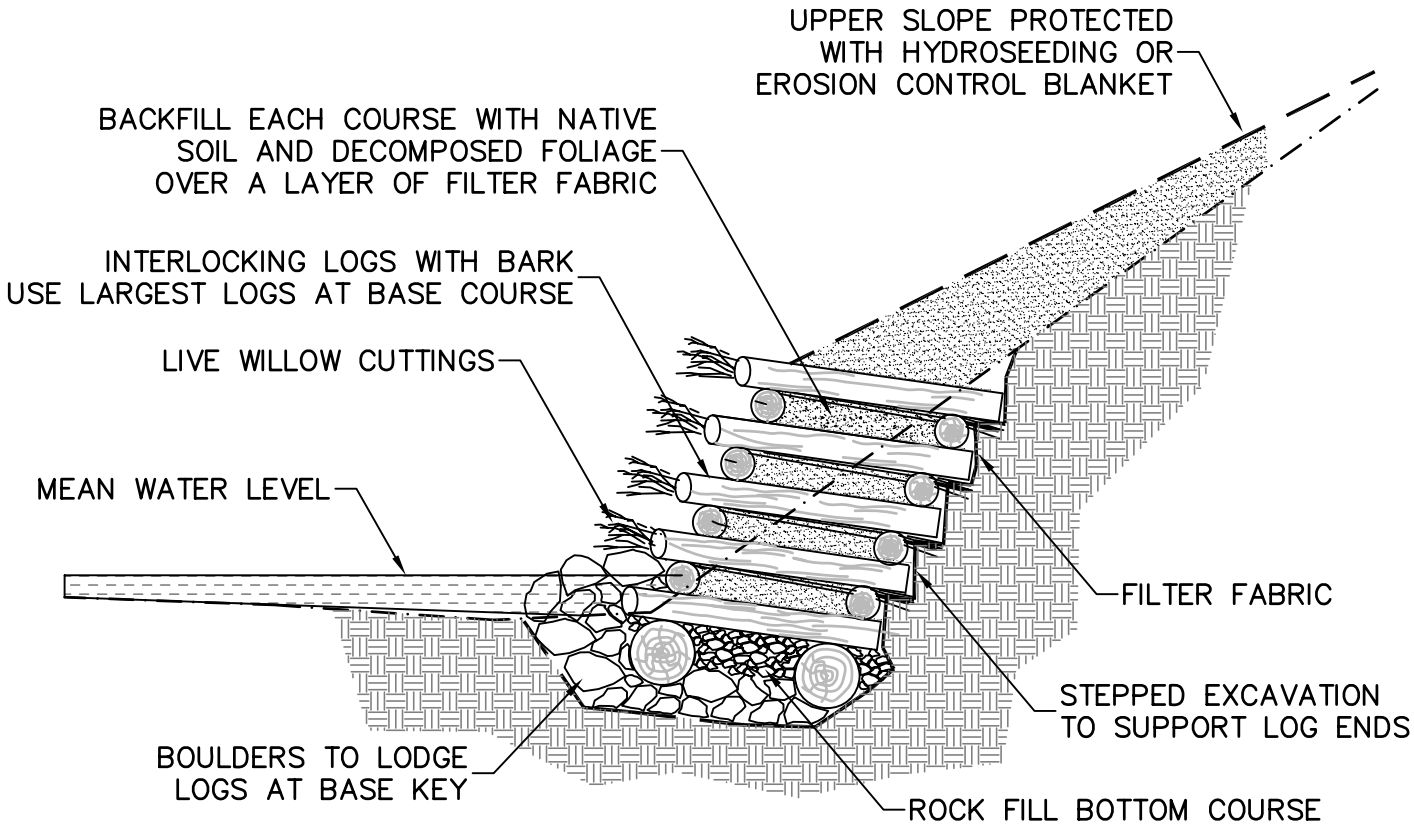


MODULAR CONCRETE UNIT ARMOR – SECTION

	BANK STABILIZATION & EROSION CONTROL	SCALE NONE	DRAWING NO.	SHEET NO. 6
	ROUTINE MAINTENANCE ACTIVITIES - CONCEPTUAL SKETCHES	DATE MARCH 2010		OF
	PROJECT NO. CONTRACT NO.	**EAST BAY REGIONAL PARK DISTRICT**		



CRIBWALL – ISOMETRIC VIEW



LOG CRIB WALL – SECTION

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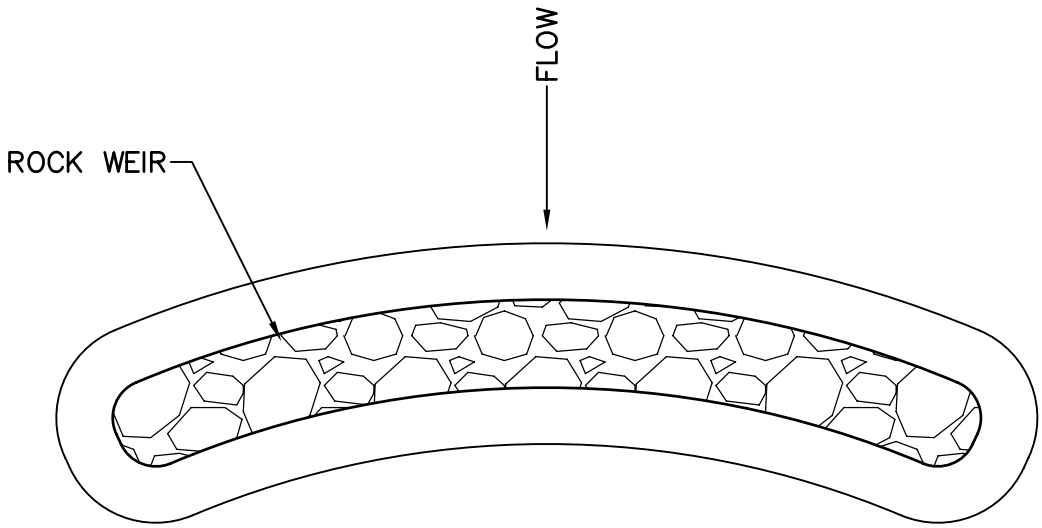
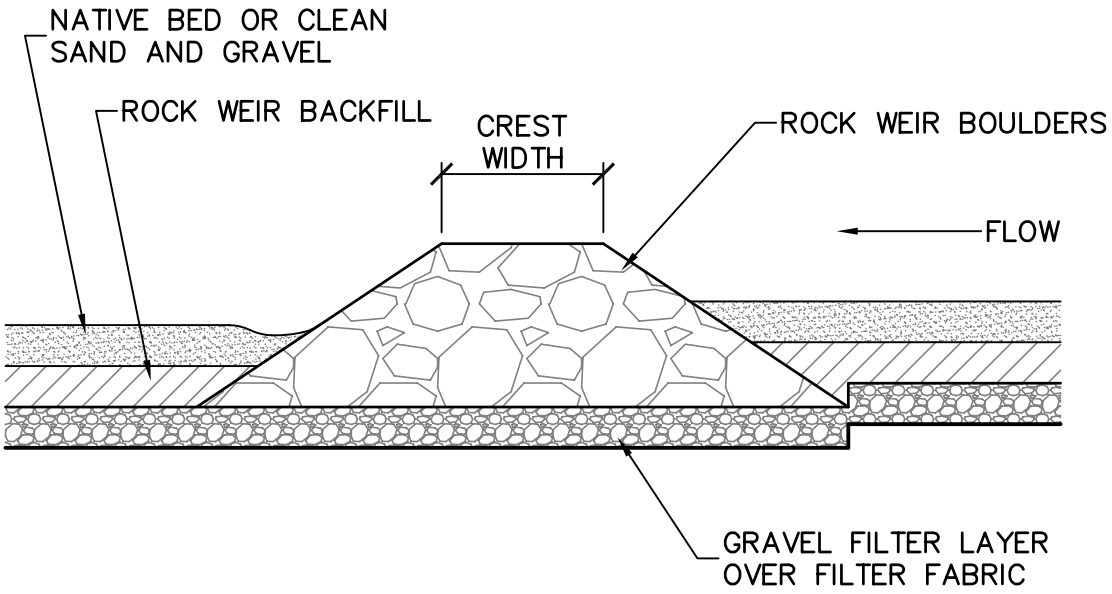
BANK STABILIZATION & EROSION CONTROL	SCALE NONE	DRAWING NO.	SHEET NO. 7	
ROUTINE MAINTENANCE ACTIVITIES - CONCEPTUAL SKETCHES	DATE MARCH 2010		OF	
PROJECT NO. CONTRACT NO.	**EAST BAY REGIONAL PARK DISTRICT**			

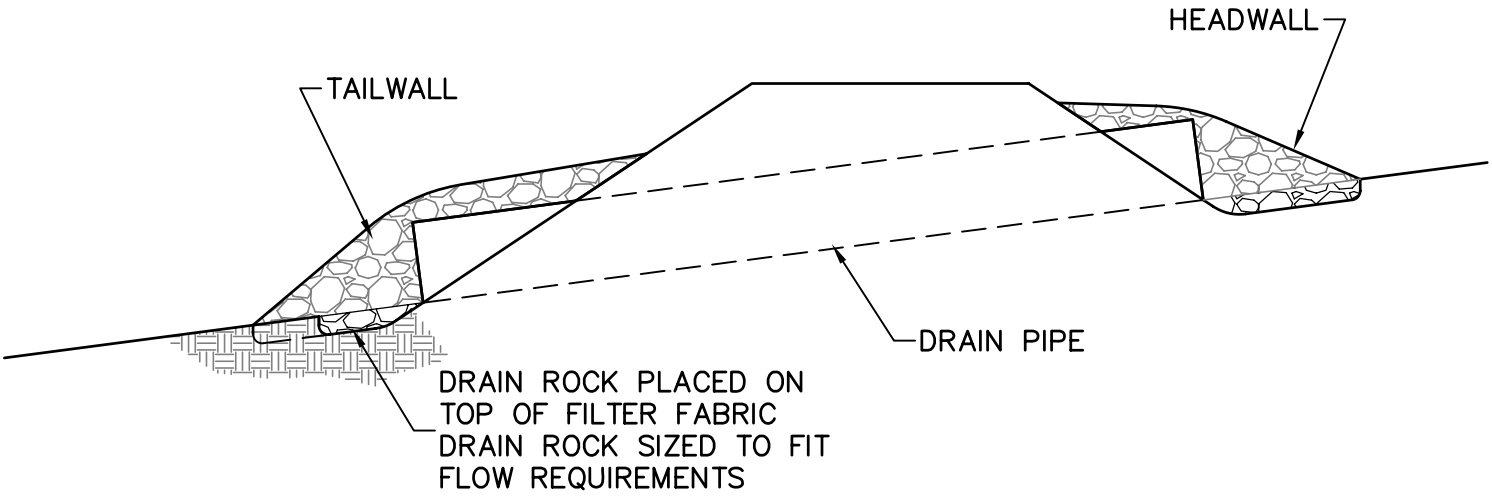


ROCK WEIR – PLAN VIEW

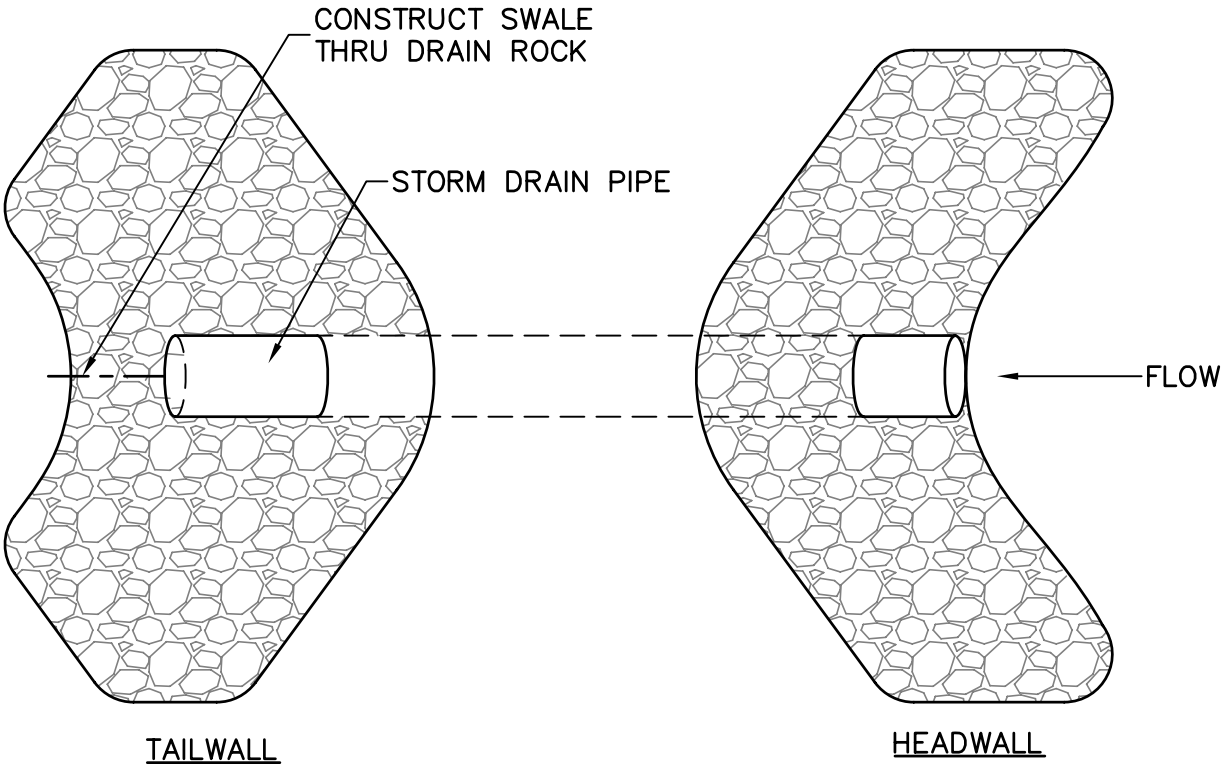


ROCK WEIR – SECTION VIEW

BANK STABILIZATION & EROSION CONTROL	SCALE NONE	DRAWING NO.	SHEET NO. 8
ROUTINE MAINTENANCE ACTIVITIES - CONCEPTUAL SKETCHES	DATE MARCH 2010		OF
PROJECT NO. CONTRACT NO.	**EAST BAY REGIONAL PARK DISTRICT**		



HEADWALL AND TAILWALL – LONGITUDINAL SECTION



HEADWALL AND TAILWALL – PLAN VIEW

HEADWALL AND TAILWALL	SCALE NONE	DRAWING NO.	SHEET NO. 9	
ROUTINE MAINTENANCE ACTIVITIES - CONCEPTUAL SKETCHES	DATE MARCH 2010		OF	
PROJECT NO. CONTRACT NO.	**EAST BAY REGIONAL PARK DISTRICT**			

ATTACHMENT B

BEST MANAGEMENT PRACTICES (BMP's) FOR REGIONAL ROUTINE MAINTENANCE ACTIVITIES IN WATERWAYS, STREAMS, PONDS AND LAKES IN EAST BAY REGIONAL PARK DISTRICT, ALAMEDA AND CONTRA COSTA COUNTIES.

The Regional Water Board has issued Waste Discharge Requirements and Water Quality Certification to the East Bay Regional Park District for routine maintenance activities in jurisdictional watershed features associated with waterways, streams, ponds, and lakes within the boundaries of the East Bay Regional Park District (District) in Alameda and Contra Costa Counties. The District will follow the normal notification process and obtain separate authorizations for all impacts that do not meet the routine maintenance activities presented in (Attachment A) of the Waste Discharge Requirements and Water Quality Certification. In addition, the District will comply with all conditions of the Memorandum of Understanding between the California Department of Fish and Game (CDFG), the U.S. Army Corps of Engineers (ACOE) Regional General Permit for East Bay Regional Park District Routine Maintenance (ACOE Fie Number 2003-28902S) and any Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) and the U.S. National Marine Fisheries Service (NMFS) that may be deemed necessary by the ACOE.

A. The following BMPs shall be used for all projects:

1. Whenever feasible the District will implement the Best Management Practices identified in the California *Salmonid Stream Habitat Restoration Manual* and the Federal *Interagency Stream Corridor Restoration Manual*.

2. All District projects shall be reviewed by qualified Stewardship staff who work directly with Operations staff to identify site specific BMPs and develop the appropriate protective guidelines for each project. Permitted District biologists familiar with sensitive species will closely monitor each project.

3. No routine maintenance activity shall be conducted that substantially disrupts the movements of aquatic indigenous life.

4. Work within special status species habitat will be performed only between August 1 and October 31 or under dry site conditions, to avoid impacts to California red-legged frogs (*Rana aurora draytonii*), Foothill yellow-legged frogs (*Rana boylii*), California tiger salamander (*Ambystoma californiense*), Western pond turtle (*Clemmys marmorata*) and minimize adverse impacts to fish and wildlife resources and their habitats.

5. Work within non-listed species habitat will be performed between April 15 and October 31. However, debris removal from culverts necessary to prevent flooding may be conducted at any time.

6. Debris removal during winter to unclog culverts, etc., shall be performed by hand crews, or by the use of trucks with winches, and/or backhoes operated from the top of the bank.

7. As much as possible the District will avoid large woody riparian vegetation and remove only the minimum necessary to complete the project.

8. Woody debris, which does not cause a problem of bank instability, flooding, or culvert blockage, will be left in place to provide in-stream cover and habitat for California red-legged frogs, Western pond turtles, salmonids, and other aquatic species.

9. The District will avoid use of earth moving equipment in waterways, streams, ponds, and lakes as much as possible, and will only use equipment in waterways, streams, ponds, and lakes after receiving the approval of the Executive Officer of the Water Board for such work.

10. No equipment will operate in standing or flowing water, and disturbance in stream channels will be minimized as much as possible.

11. The District will avoid using heavy equipment in areas where hand tools or light equipment are capable of performing the task.

12. Whenever feasible the District will use rubber-tired vehicles as opposed to track mounted equipment to avoid soil compaction and disturbance.

13. New concrete will not be placed or poured on-site in a location that may contact any natural water bodies. Newly poured concrete shall be allowed to completely cure (a minimum of 28 days) or be treated with a CDFG-approved sealant before it comes into contact with flowing water.

14. Any concrete pouring will be isolated from all natural waterbodies through appropriate wrapping or water barrier equipment.

15. Prior to work, all equipment will be inspected for fuel, oil, or hydraulic leaks and repaired.

16. At the work site, fueling of equipment and vehicles will only occur in upland areas and at a minimum of 100 feet from open water, except on levee repairs where moving heavy equipment will cause further damage to the levee and create additional soil erosion potential.

17. To avoid and minimize disturbance of riparian habitat, the District will plant riparian vegetation by hand or with a rubber-tired backhoe from above top of bank.

18. Only dewatering equipment shall be operated in areas of flowing or standing water; no fueling, cleaning, or maintenance of vehicles or equipment shall take place within any areas where an accidental discharge to waters of the State may occur; construction materials and heavy equipment must be stored outside of the active flow of the creek. When work within waters of the State is necessary, the entire stream flow shall be diverted around the work area, using gravel-filled sand bag cofferdams, hoses, and pumps. All dewatering methods shall be installed such that natural flow is maintained upstream and downstream of the project area. Any temporary dams or diversions shall be installed such that the diversion does not cause sedimentation, siltation, or erosion upstream or downstream of the project area. All dewatering methods shall be removed immediately upon completion of Project activities. When pumps are necessary to maintain flow around the work site, they shall be provided with appropriate screening to avoid entraining any life stages of listed species that may be present at the work site, and the screens shall be monitored regularly while the pump is in operation.

B. The following BMPs shall be used when performing work on natural stream crossings (fords):

1. Natural stream crossings are annually evaluated District-wide to determine the need for maintenance.

2. Minimal grading or debris removal will be performed to make the crossing passable.

3. Stream gravels and sediments will be left within the dry portion of the stream channel rather than moved to upland areas.

4. Natural crossings (that require less intensive maintenance), will be preferred and used where feasible.

C. The following BMPs shall be used when removing and replacing culverts:

1. Whenever galvanized metal culverts are to be replaced, the District will replace old metal-galvanized culverts with plastic culverts. This will minimize the need for follow-up maintenance and stream disturbance. The District may request the use of alternative culvert materials, if the use of plastic culverts is considered infeasible. But alternate materials shall

not be used without the approval of the Executive Officer of the Regional Water Board.

2. Whenever feasible, the District will install replacement culverts large enough to accommodate anticipated 25-year frequency storm events. This will minimize the need for follow-up maintenance and stream disturbance. The District may request the use of alternative sizing parameters, if installing a culvert capable of conveying the 25-year frequency flow volume is considered infeasible. But alternate design storms shall not be used without the approval of the Executive Officer of the Regional Water Board. Replacement culverts shall be designed to conform to sound design principles such as outlined in the Regional Water Board's *Primer on Stream and River Protection for the Regulator and Program Manager*, Technical Reference Circular, W.D. 02 - #1". In addition, whenever feasible, the District will install additional culverts to drain a flood plain.

3. The District shall install replacement culverts at the existing grade to maintain natural stream gradient and minimize under cutting and erosion.

4. Whenever culverts must be replaced or repaired, the District will remove culverts to restore and enhance the natural stream corridor and riparian vegetation to the maximum extent feasible.

5. Whenever culverts must be replaced or repaired the District will remove culverts and replace them with clear-span bridges or armored articulated fords to the maximum extent feasible. This will re-establish typical stream flow and reduce erosion.

6. To stabilize culverts the District will construct headwalls, discharge end splash pads, and install armoring with porous materials or other techniques that allow plant growth and avoid the permanent elimination of stream habitat.

D. The following practices shall be used to stabilize banks and prevent or control erosion:

1. The District shall use bio-engineering such as planting riparian woody vegetation, willow wattles and mattresses, log crib-walls, log and stump deflectors, or vortex weirs constructed of rocks or logs to stabilize banks and reduce erosion. The District may request the use of more hardened bank stabilization techniques, if the use of bio-engineered techniques is considered infeasible at a project site. But more hardened bank armoring shall not be implemented without the approval of the Executive Officer of the Water Board.

2. Where appropriate (e.g., when revegetation is not likely to be well established prior to the start of the rainy season), the District shall use jute netting or other erosion control fabrics to provide protection until adequate plant growth can provide permanent protection.

3. The District shall broadcast and/or hydro seed (native mix) with tackified straw and planting of willow, maple, alder, and other native riparian woody vegetation to stabilize banks and prevent erosion.

E. The following practices shall be used for routine maintenance dredging of ponds and lakes. The District shall provide reasons for any deviations for prior review and approval by the Executive Officer:

1. The District shall perform work in dry conditions above the water level. Otherwise, the District shall use floating open water turbidity curtains to contain sediment.

2. The District may implement other erosion, sediment and turbidity control measures and procedures to contain sediments, minimize siltation, and prevent downstream turbidity.

3. The District shall dredge with an excavator from top of bank.

4. All sediments removed during dredging will be disposed of in the appropriate upland location(s), or re-used as allowed in the Order.

5. The District shall minimize removal of riparian vegetation during dredging operations.

F. The following practices shall be used for pond restoration and enhancement:

1. General pond restoration dredging will occur during dry site conditions.

2. Stock ponds will only be dredged when dry and after determining no California red-legged frogs, California tiger salamanders, or Western pond turtles are present.

3. Wherever feasible, dredged ponds and earthen dams will be reconfigured to enhance the habitat for aquatic species.

G. Restoration and enhancement to address or offset temporal impacts to waterbodies

1. While conducting routine maintenance, the District shall incorporate an adaptive management strategy to improve existing conditions. Overall, implementing the above BMPs reduces adverse effects to parklands and

nearby waterbodies. The District shall also include restoration and enhancement of existing ponds, streams and other waterbodies to address or offset any temporary impacts associated with the maintenance of the various existing facilities. Restoration and enhancement will include, but need not be limited to, the following:

a. Stream and pond restoration for special status species and other aquatic species.
b. Removing in stream man-made structures to restore the natural stream conditions.
c. Planting native riparian and wetland vegetation to improve water quality.
d. Controlling and removing non-native invasive species (i.e., bullfrogs, exotic fish, Chinese mitten crab, etc.).
e. Identifying and removing in stream barriers to fish and other aquatic species.
f. Installing nest boxes for riparian bird species (i.e., wood ducks, tree swallows, and flycatchers).

2. The District will select the appropriate sites and type of restoration to compensate for any potential temporary impacts or minor permanent impacts associated with all routine maintenance projects. These mitigation sites will be located within the District's watershed to insure the high likelihood of restoration success. In addition, mitigation sites will be located where wetlands, ponds, or streams previously existed or where nearby waterbodies still exist. The District will calculate the total area (i.e., linear feet, square feet, acres) for each routine project determined to potentially have a temporary or minor permanent impact. In addition, the total area of each enhancement and restoration project will be similarly calculated and directly applied at an appropriate ratio to compensate for any temporary and minor permanent cumulative impacts associated with a routine maintenance project and reported in the annual report.

3. For the duration of the five-year permit, the District has identified 17 potential restoration projects that would create and/or enhance about 35 acres of tidal wetlands, 8.11 acres of lentic water bodies, and 0.88 acres (1,960 linear feet) of stream habitat. These proposed restoration sites are within the current distributional range of the California red-legged frog, California tiger salamander, California clapper rail, salt marsh harvest mouse, and/or Western pond turtle and will be enhanced to provide additional permanent habitat for these special status species. In addition, they will provide long-term habitat for a variety of other aquatic species. Restoring and/or creating permanent aquatic habitat will more than compensate for the small-scale temporary cumulative impacts associated with the various routine maintenance projects. Any unused restoration credits that accrue can be used for future routine maintenance projects determined to have temporary impacts. It is also

important to recognize that although some projects may have temporary impacts, most routine maintenance projects consist of improving existing conditions and enhancing the habitat for aquatic species (i.e., cattails removal from choked out waterbodies, replacing or removing dysfunctional culverts, removing stream obstructions and barriers). Restoring and/or creating permanent aquatic habitat will compensate for the small-scale temporary and any minor permanent cumulative impacts associated with the various routine maintenance projects.

Any compensatory mitigation (restoration) activities shall be reported in the Annual Post-Maintenance Reports (See Attachment C to the Order). In addition, the number, location, and nature of restoration sites including pre-construction and post-construction photographs of restored sites shall be submitted as part of the Annual Post-Maintenance Reports which are due on February 15th each year.

H. Vegetation Management

1. All vegetation management activities that could result in the runoff of herbicides that are not registered for aquatic use into waters of the State are prohibited.
2. The Discharger shall select and apply herbicides according to the product label directions and uses approved by the U.S. EPA and the California Department of Pesticide Regulation, and per applicable provisions of this Order
3. Only herbicides and surfactants registered for aquatic use will be applied to aquatic areas or within the banks of channels. Herbicides will not be applied during or within 24 hours prior to rain.
4. Livestock will be used for vegetation management to avoid the use of chemical herbicides, to control invasive vegetation, and promote the growth of native vegetation. Where livestock are used in association with a specific routine maintenance project, livestock shall be managed to prevent them from creating or worsening existing erosion and sedimentation problems in flowing stream channels.
5. Vegetation management activities that could result in the destabilization of stream banks or increase sediment input into waters of the State are prohibited.
6. Vegetation management activities shall not adversely impact the riparian zone, shade, canopy coverage, or habitat. Overall impacts of vegetation management activities shall be implemented in a manner that improves net habitat values and beneficial uses in affected waters of the State.

East Bay Regional Park District

Regional Maintenance Activities
Alameda and Contra Costa Counties

ATTACHMENT C

California Regional Water Quality Control Plan
San Francisco Bay Region
Self-Monitoring Program

ATTACHMENT C
CALIFORNIA REGIONAL WATER QUALITY CONTROL PLAN
SAN FRANCISCO BAY REGION
SELF-MONITORING PROGRAM
for
East Bay Regional Park District
Regional Maintenance Activities

I. General

A. Basis

Reporting responsibilities of the East Bay Regional Park District as " Discharger" are specified in Sections 13225(a), 13267(b), 13268, 13383, 13387(b) of the California Water Code and this Board's Resolution No. 73-167.

B. Purpose

The principal purposes of a monitoring program by a discharger, also referred to as a Self-Monitoring Program, are to document compliance with discharge requirements and prohibitions established by this Board and to facilitate self-policing by the discharger in the prevention and abatement of pollution arising from maintenance activities.

C. Monitoring Methods

Monitoring of impact and mitigation sites shall be consistent with standard protocols for assessing percent coverage by plants, survival of plants, stability of banks, stability of berms, geomorphic stability of channels. Monitoring reports shall be signed by either an individual or a position having responsibility for the overall operation of the regulated activity (e.g., authorized agent, field supervisor, or project manager).

II. Specifications for Monitoring

The Discharger is required to perform monitoring in accordance with the following conditions and requirements:

A. Standard Observations

As appropriate, the following observations shall be recorded annually for each impact and mitigation site, until the appropriate performance criteria are attained (For some sites, such as sedimentation ponds or beach replenishment, these observations are not necessary).

1. Impact Sites:
   a. Percent coverage by vegetation relative to pre-impact vegetation.
   b. Percent survival of planted shrubs and trees.
   c. Stability of impacted creek bed and banks (e.g., slumping, undercutting, headcuts, knickpoints, incision, etc.).
   d. Stability of culvert inlets and outlets, including adjacent natural creek channels.
   e. Pre-construction and post-construction photographs
   f. Annual post-construction photographs for all sites that have not attained their performance criteria.

2. Mitigation Sites:

a. Percent coverage by vegetation relative to pre-restoration/enhancement vegetation.
b. Percent survival of planted shrubs and trees.
c. Stability of impacted creek bed and banks (e.g., slumping, undercutting, headcuts, knickpoints, incision, etc.).
d. Stability of berms supporting mitigation ponds.
e. Duration and depth of ponding during breeding seasons for listed amphibians at pond restoration or enhancement sites.
f. Pre-construction and post-construction photographs
g. Annual post-construction photographs for all sites that have not attained their performance criteria.
h. Any observations of use of mitigation sites by California red-legged frog, California tiger salamander, California clapper rail, salt marsh harvest mouse, Western pond turtle, or any other special status aquatic species.

B. Records to be maintained

1. Written reports, maintenance records, field notes, photographs and other records shall be maintained by the Discharger for a minimum of five years. Records shall include notes and observations for each site as follows:

a. Identification of each impact or mitigation site.
b. The dimensions (square feet and/or linear feet) of impacted waters of the State at each impact site
c. The dimensions (square feet and/or linear feet) of enhanced or restored waters of the State at each mitigation site
d. Date and time of monitoring event.
e. Observations made of vegetation (percent coverage, percent survival, etc.)
f. Observations of channel and/or berm stability (e.g., slumping, undercutting, headcuts, knickpoints, incision, etc.)
g. Depth and duration of ponding.
h. Any records of species observed using the site
i. Site photographs
j. Map or maps of each site showing the areas in which work was performed at each site and the locations and directions at which photographs were taken.

2. Written reports, maintenance records, field notes, photographs and other records shall be made accessible to Regional Water Board staff upon request.

III. Reports to be filed with the Board

A. Reports and the letter transmitting reports shall be signed by the general manager or assistant general manager(s) of the Discharger, or by a duly authorized representative of that person.

B. Annual Notification of Proposed Projects

1. The Annual Notification of Proposed Projects for the following year's proposed projects shall be submitted by June 1st of each year.

2. The Annual Notification of Proposed Projects shall include:

a. All routine maintenance activities planned for the following year, including the Nationwide Permit (NWP) that would have authorized each project;
b. Individual project locations, scope, purpose and need;
c. The amount of fill of waters of the State, including wetlands, for each project, in square feet and/or linear feet as appropriate. For culvert replacement or rehabilitation projects, the length of existing and replacement culverts shall also be reported. [1]:
d. Descriptions of all on-site mitigation (e.g., stabilization of disturbed surfaces, re-vegetation of disturbed surfaces, planting of riparian vegetation, etc) for that year's projects.
e. Descriptions of the off-site mitigation projects proposed for that year's projects (Since many mitigation sites will be consolidated mitigation sites compensate for impacts of multiple small projects, the appropriateness of each year's proposed mitigation shall be evaluated with respect to net impacts and net mitigation).
f. Performance criteria for on-site restoration that can be used to establish that habitats at impacted sites have recovered to near pre-impact levels (e.g., percent cover of disturbed surfaces with vegetation, percent survival of replanted riparian vegetation, etc.).
g. Performance criteria for off-site mitigation that can be used to establish that the mitigation projects have successfully created or enhanced habitat (e.g., geomorphic stability of channels and/or berms, percent survival of planted riparian vegetation, percent cover of planted vegetation, sufficient ponding to support breeding of listed amphibians, etc.).

C. Annual Post-Maintenance Reports

1. Following the end of the year, the discharger shall prepare and submit by February 15th of each year, a detailed report (annual report) on all completed routine maintenance projects and mitigation sites implemented during the previous year.

2. The annual report shall contain:

a. Information regarding the various maintenance projects' locations, length and width of impact areas. At culvert sites, the report shall include the length of the existing and replacement culverts. This information may be submitted in a tabular format with supporting text.

b. Information regarding the various mitigation projects' locations, length and width of impact areas. For each mitigation site, the annual report shall describe the type of mitigation habitat that was restored and/or enhanced. This information may be submitted in a tabular format with supporting text.

[1] Due to the relatively small footprint of most projects and the similar nature of many projects, the notification and post-maintenance reports may be organized as a large table. This table should be augmented with explanatory text for any unusual impact or mitigation sites.

c. At bank stabilization sites, the project report shall include a description of the bio-engineering bank stabilization methods used at the site. If bio-engineering bank stabilization was not implemented, the annual report shall include a rationale for selecting an alternate bank stabilization method.

d. A list of all BMPs applied to the various maintenance projects completed within each preceding year as part of the required annual report described above.

e. A description of any unanticipated field conditions that affected the implementation of maintenance or mitigation projects.

f. Any changes to planned maintenance projects or mitigation projects, as they were described in the Annual Notification of Proposed Projects.

g. All of the Standard Observations specified in Section II.A of this SMP.

h. Discussions of each site's progress toward meeting its performance criteria, including any recommendations for maintenance necessary to help attain the performance criteria and summaries of maintenance activities that have been performed in the prior year. If necessary, contingency measures for all mitigation projects shall be discussed. The discharger shall also identify any special approaches or conditions utilized to complete the maintenance and mitigation projects.

i. A current account of impacts and mitigation restoration, including: a summary of losses of wetlands/waters of the State associated with each individual routine maintenance activity project, including the total acreage, linear feet, and type of wetland/waters of the State impacted; a summary of the gains of wetlands/waters of the State associated with each mitigation site including the total acreage, linear feet, and type of wetland/waters of the State enhanced or restored; and a summary of net increase (or decrease) in the total acres, linear feet, and type of wetland/water of the State created in the previous year. This information will be used to determine whether or not the Discharger has created excess mitigation credits for use by the Discharger as mitigation for future maintenance projects, or as otherwise allowed by the Provisions of the Order.

j. If any impact or mitigation sites have attained their performance criteria, the Annual Report will present the basis for determining that such sites have met their performance criteria. Upon receiving concurrence from the Executive Officer of the Regional Board, these sites may be removed from annual monitoring and reporting requirements.

East Bay Regional Park District

Regional Maintenance Activities
Alameda and Contra Costa Counties

ATTACHMENT D

Affected Water Bodies and Regional Maps

List of Waterbodies on EBRPD Property in San Francisco Bay Regional Water Quality Control Board Jurisdiction

Waterbody Name	Regional Park(s)
Agua Caliente Creek	Mission Peak/Monument Peak
Alameda Creek	Ohlone Wilderness, Sunol
Alhambra Creek	Briones, Martinez Shoreline
Altamont Creek	Brushy Peak
Apperson Creek	Sunol
Ardenwood Creek	Coyote Hills
Arroyo Del Cerro	Diablo Foothills
Arroyo Del Valle	Del Valle, Shadow Cliffs
Baxter Creek	Point Isabel
Bear Creek	Briones
Bolinas Creek	Las Trampas
Bollinger Creek	Las Trampas
Bull Valley Creek	Carquinez Strait Shoreline
Calaveras Creek	Sunol
Canada del Cierbo	Crockett Hills
Cascade Creek	Briones
Castro Creek	Kennedy Grove, Sobrante Ridge
Castro Valley Creek	Cull Canyon
Cerrito Creek	Eastshore State Park
Codornices Creek	Eastshore State Park
Cottonwood Creek	Doolan Canyon
Crandall Creek	Coyote Hills
Cull Creek	Cull Canyon, Las Trampas
Cull Lagoon	Cull Canyon
Damon Slough	Martin Luther King Jr. Shore
Del Valle	Del Valle
Devaney Canyon Creek	Pleasanton Ridge
Don Castro	Don Castro
Doolan Canyon	Doolan Canyon
Dry Creek	Garin, Dry Creek Pioneer
Dublin Creek	Dublin Hills
East Creek	Martin Luther King Jr. Shore
Edwards Creek	Crockett Hills
Elkhorn Creek	Crockett Hills, Carquinez Strait Shoreline
Elmhurst Creek	Martin Luther King Jr. Shore
Estudillo Canal	Lake Chabot
Frazer Creek	Carquinez Strait Shoreline
Garrity Creek	San Pablo Bay Shoreline
Goethels Canyon	Clayton Ranch
Gold Creek	Pleasanton Ridge
Grass Valley Creek	Anthony Chabot, Lake Chabot
Grayson Creek	Briones
Grizzly Creek	Las Trampas
Harwood (Claremont) Creek	Claremont Canyon
Head Canyon Creek	Pleasanton Ridge
Hollis Creek	Dublin Hills
Indian Creek	Ohlone Wilderness
Indian Joe Creek	Sunol
Irish Canyon	Black Diamond Mines
Jewel Lake	Tilden
Johnson Landing Canal	Hayward Shoreline
Kennedy Creek	Kennedy Grove
Kirker Creek	Black Diamond Mines

List of Waterbodies on EBRPD Property in San Francisco Bay Regional Water Quality Control Board Jurisdiction

Waterbody Name	Regional Park(s)
La Costa Creek	Ohlone Wilderness
Lafayette Creek	Lafayette Moraga Trail
Lake Anza	Tilden
Lake Chabot	Chabot
Lake Temescal	Temescal
Las Trampas Creek	Las Trampas
Leyden Creek	Sunol, Mission Peak/Monument Peak
Lila Creek	Wildcat Canyon
Little Pine Creek	Diablo Foothills
Marin Creek	Eastshore State Park
Martin Canyon	Dublin Hills
Merle Creek	Carquinez Strait Shoreline
Mission Creek	Mission Peak/Monument Peak
Morrison Creek	Vargas Plateau
Mount Diablo Creek	Clayton Ranch
Murrieta Creek	Ohlone Wilderness
Norris Creek	Bishop Ranch
Oak Creek	Bishop Ranch
Patterson Creek	Coyote Hills
Pine Creek	Diablo Foothills
Pinole Creek	Briones
Pirate Creek	Sunol
Quarry Lakes	Quarry Lakes
Redwood Creek	Redwood, Anthony Chabot
Reliez Creek	Briones
Rheem Creek	Point Pinole
Rifle Range Branch	Leona Canyon/Heights
San Antonio Creek	Ohlone Wilderness
San Leandro Creek	Huckleberry, Lake Chabot, Martin Luther King Jr. Shoreline
San Lorenzo Creek	Don Castro
San Pablo Creek	Kennedy Grove
Sans Crainte Creek	Diablo Foothills
Schoolhouse Creek	Eastshore State Park
Scott Creek	Mission Peak/Monument Peak
Shadow Cliffs	Shadow Cliffs
Shafer Creek	Ohlone Wilderness
Shinn Pond	Quarry Lakes
Sinbad Creek	Pleasanton Ridge
Sindicich Creek	Briones
Spring Water Creek	Briones
Strawberry Creek	Eastshore State Park
Sulphur Creek	Hayward Shoreline
Sycamore Creek	Morgan Territory
Tassajara Creek	Morgan Territory, Tassajara Creek
Tehan Canyon	Pleasanton Ridge
Temescal Creek	Temescal
Tin House Creek	Briones
Toroges Creek	Mission Peak/Monument Peak
Trout Creek	Ohlone Wilderness
Welch Creek	Sunol
Whitlock Creek	Ohlone Wilderness
Wildcat Creek	Tilden, Wildcat Canyon
Williams Gulch	Ohlone Wilderness

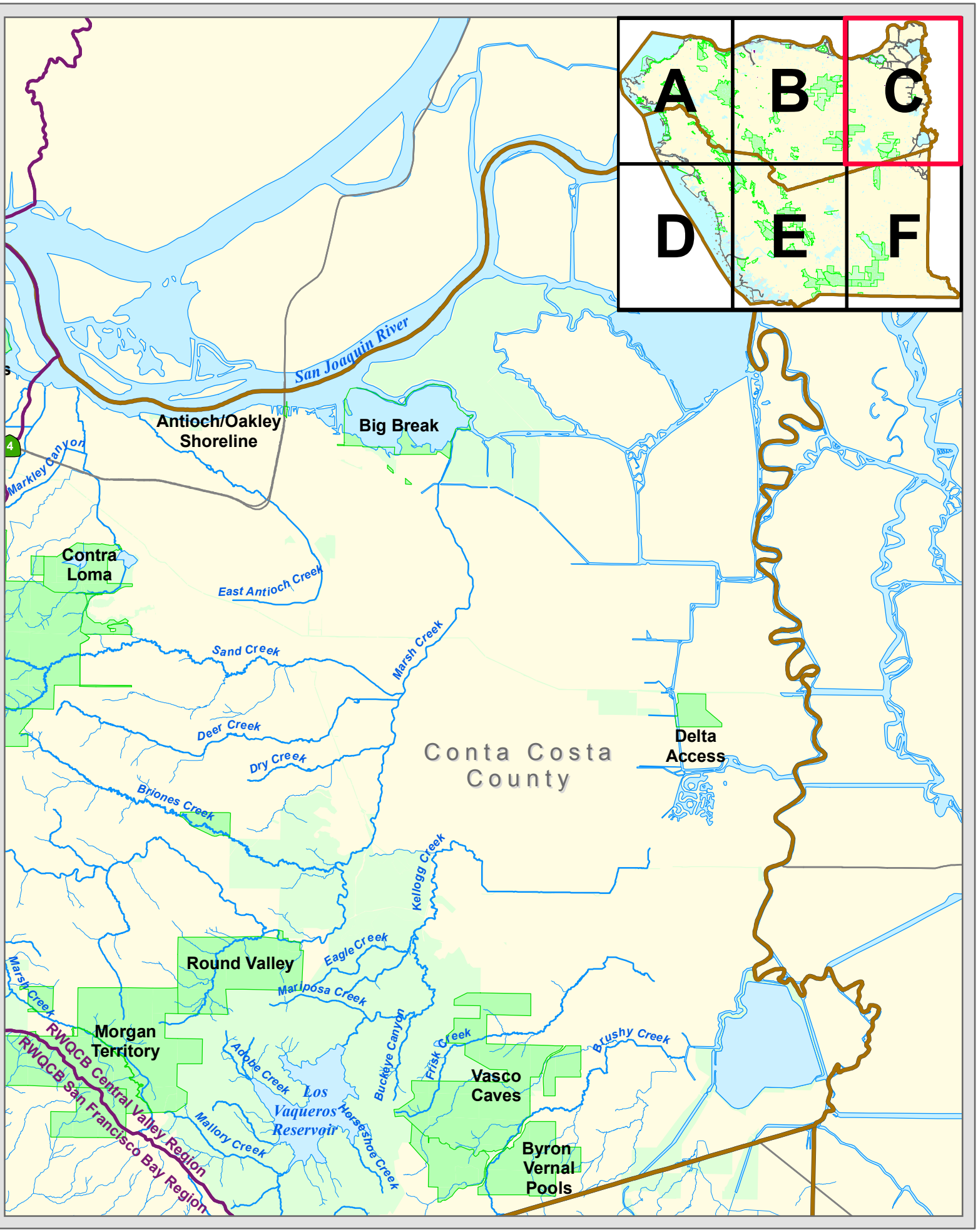
List of Waterbodies on EBRPD Property in San Francisco Bay Regional Water Quality Control Board Jurisdiction

Waterbody Name	Regional Park(s)
Zeile Creek	Garin

EAST BAY REGIONAL PARK DISTRICT

EBRPD Parklands
Other Open Space
Streams
Major Streams
Freeways
1:150,000
May 2011

EAST BAY REGIONAL PARK DISTRICT



EAST BAY REGIONAL PARK DISTRICT

EBRPD Parklands
Other Open Space
Streams
Major Streams
Freeways
1:150,000
May 2011

EAST BAY REGIONAL PARK DISTRICT

EBRPD Parklands
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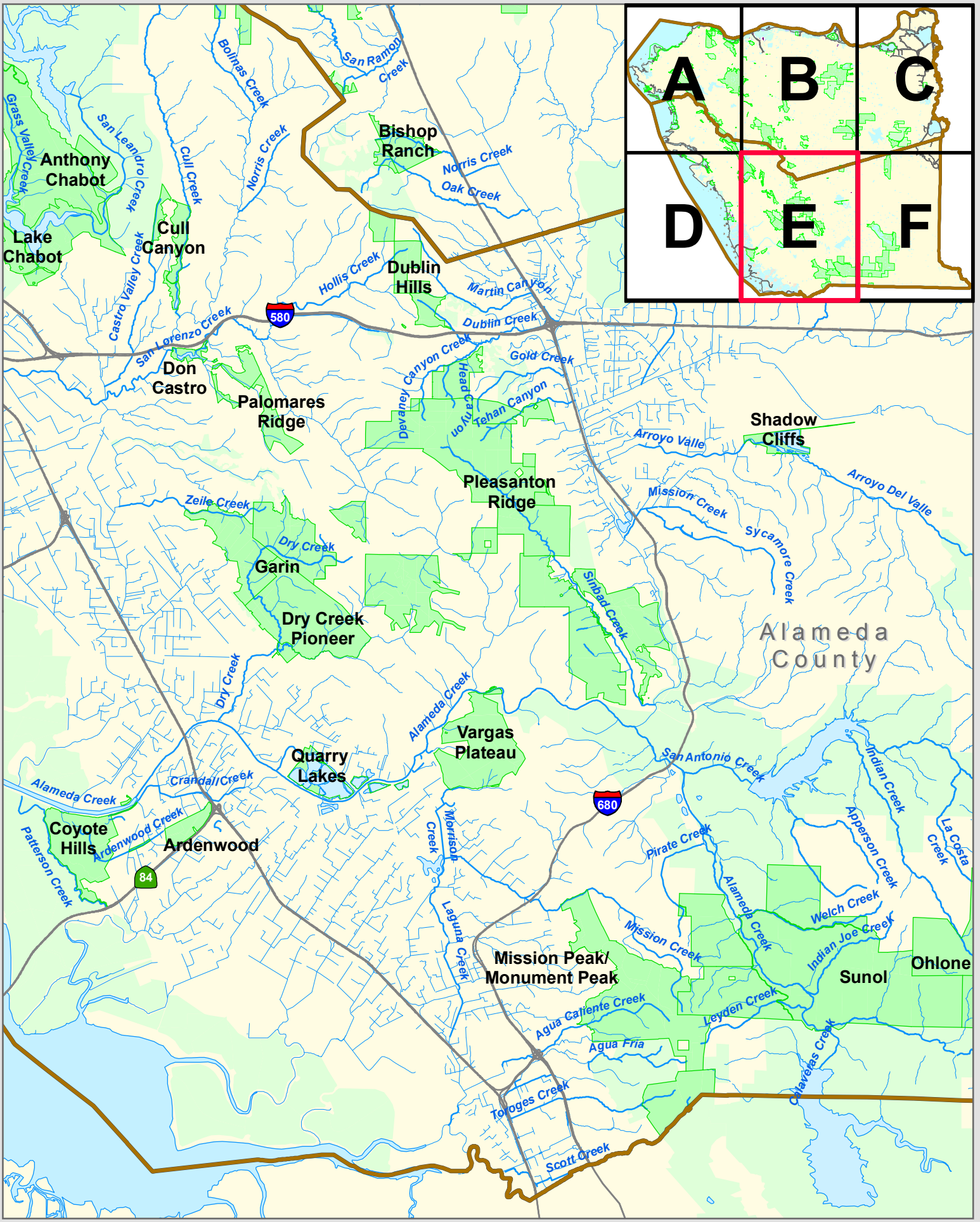
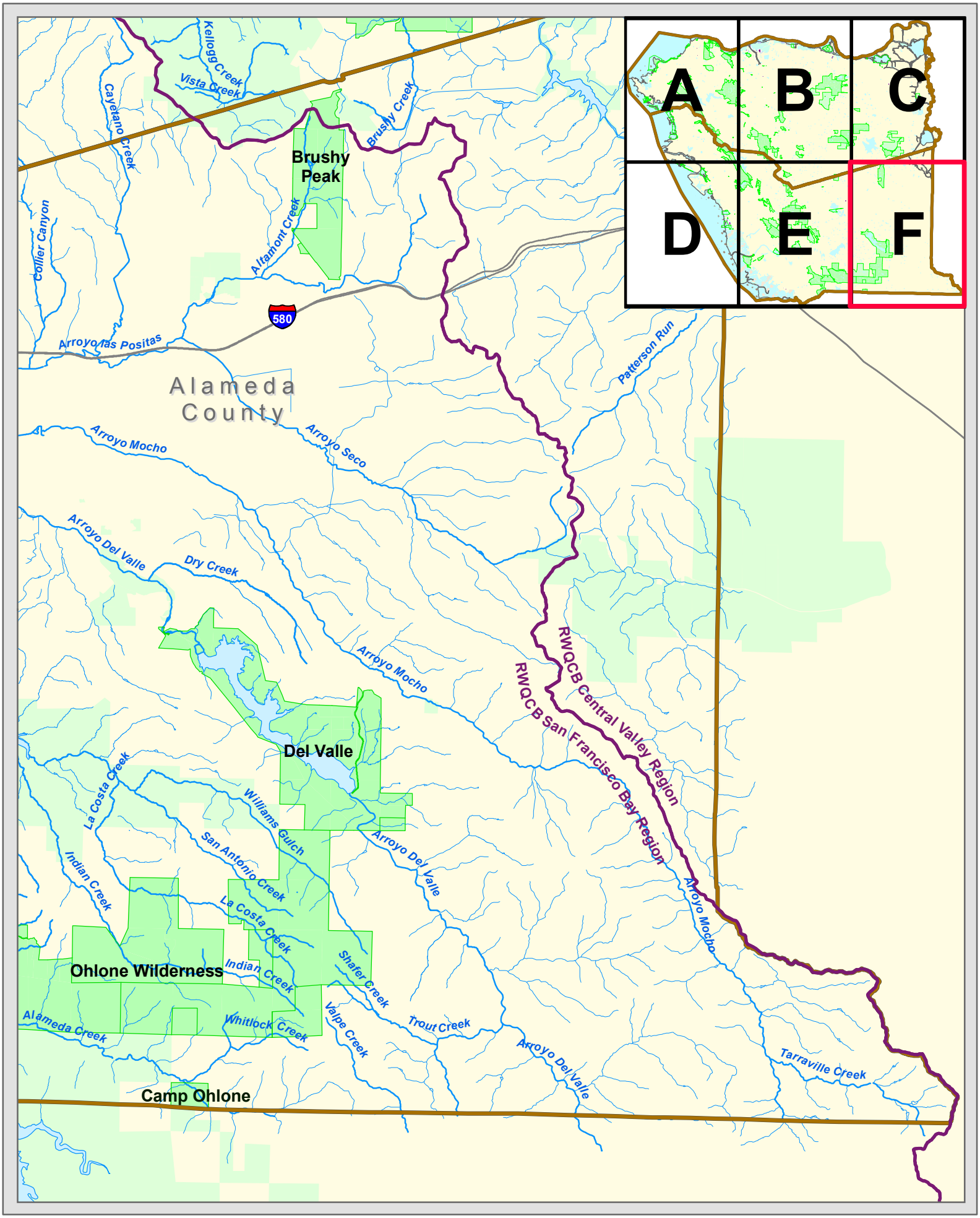
May 2011



EAST BAY REGIONAL PARK DISTRICT

EBRPD Parklands
Other Open Space
Streams
Major Streams
Freeways

1:150,000
May 2011



EAST BAY REGIONAL PARK DISTRICT

EBRPD Parklands
Other Open Space
Streams
Major Streams
Freeways
1:150,000
May 2011

East Bay Regional Park District

Regional Maintenance Activities
Alameda and Contra Costa Counties

ATTACHMENT E

Federally Listed Species that Occur Within East Bay Regional Park District Property

Attachment E

Federally listed species that occur within East Bay Regional Park District and potentially occur at various project sites that are covered under the U.S. Fish and Wildlife Service and NOAA – National Marine Fisheries Service programmatic consultation (November 16, 2006).

Longhorn fairy shrimp (*Branchinecta longiantenna*)
Vernal pool fairy shrimp (*Branchinecta lynchi*)
Vernal pool tadpole shrimp (*Lepidurus packardi*)
Delta smelt (*Hypomesus transpacificus*)
Chinook salmon (*Oncorhynchus tshawytscha*)
Steelhead (*Oncorhynchus mykiss*)
California tiger salamander (*Ambystoma californiense*)
California red-legged frog (*Rana draytonii*) formally (*Rana aurora draytonii*)
Giant garter snake (*Thamnophis gigas*)
California clapper rail (*Rallus longirostris obsoletus*)
Salt marsh harvest mouse (*Reithrodontomys raviventris*)
Contra Costa goldfields (*Lasthenia conjugens*)
Soft bird-beak (*Cordylanthus mollis ssp. mollis*)

These thirteen covered species could potentially occur at various proposed routine maintenance project sites within the East Bay Regional Park District. To assess potential effects on federally listed we are providing a quantitative and qualitative analysis of all the East Bay Regional Park District's (District) routine maintenance projects conducted under our U.S. Army Corps of Engineer's General permits Numbers 23394S and 28902S. This includes evaluating potential impacts of routine maintenance projects to federally listed species and potential effects to critical habitat. From 1998-2009 the District worked on a total 247 projects in a variety of wetlands throughout our parklands. One hundred twenty three of these projects had no permanent impact or wetland loss and 124 projects had some permanent impact resulting in wetland loss per project ranging from <0.0001 acres to 0.09 acres, for an overall cumulative total of 1.016 acres of permanent wetland loss. To compensate for this wetland loss the District created and/or restored > 2.58 acres of lentic water habitat.

Not all of the 247 routine maintenance projects occurred in habitat that support federally listed species. Within the District, the California red-legged frog (*Rana draytonii*) occurs in 81 ponds and 26 district stream reaches, and California tiger salamander (*Ambystoma californiense*) have been documented breeding in 80 stock ponds, where 39% of the ponds these two species are sympatric. During the eleven year permit period, 116 routine projects were completed in potentially suitable habitat and 55 projects resulted in some permanent wetland loss within the distributional range of the California red-legged frog. The impacts per project ranged from <0.0001 to 0.02 acres, for an overall total of 0.360 acres of permanent wetland loss in areas which potentially provide habitat for this species. The other 61 projects had minimal temporary impact and resulted in no permanent wetland loss or adversely affected aquatic breeding or non-breeding habitats.

While 101 routine projects were completed within the distributional range of California tiger salamander, none of the projects impacted lentic waterbodies or resulted in temporary or permanent loss of aquatic breeding habitat. In addition, the vast majority of routine maintenance projects occurred in various drainages and stream reaches that do not support California tiger salamander breeding populations. The projects primarily include the replacement of culverts and installation of armored fords on existing roads with un-measurable temporary disturbance to suitable upland habitat for California tiger salamanders.

Although these projects occurred in the distributional range of the California red-legged frog and/or California tiger salamander, not all of the projects occurred within critical habitat designation or in areas known to support the species. Large portions of District lands are excluded from critical habitat designation of California tiger salamander (Federal Register: August 23, 2005 – Volume 70, Number 162). In addition as previously stated, none of the routine maintenance projects had a direct, indirect, and/or cumulative effect on aquatic or terrestrial habitat known to support or potentially suitable for California tiger salamanders.

Similarly, the vast majority of the District's parklands in eastern Contra Costa County are excluded from critical habitat designation for California red-legged frog (Federal Register: March 17, 2010 – Volume 75, Number 511). However, critical habitat units in Alameda and Contra Costa Counties include District lands.

Consequently, the District's eleven years of routine maintenance projects permanently impacted 0.287 acres of wetlands within California red-legged frog critical habitat designation, and 0.098 acres of wetland loss within the critical habitat designation for the California tiger salamander (Federal Register: August 23, 2005 – Volume 70, Number 162). However, most of the permanent wetland loss in critical habitat designation occurred at sites where we have not documented these species. In fact, the 0.098 acres of permanent impacts affected lotic habitat and in streams that do not support California tiger salamander breeding populations. Moreover, from 1998-2009 we have not documented any California red-legged frogs or California tiger salamanders at the projects sites. Nevertheless, to assist in the conservation and recovery, the District has restored and/or created 2.40 acres of California red-legged frog and 0.78 acres of California tiger salamander lentic water habitat.

Although District lands support populations of longhorn fairy shrimp (*Branchinecta longiantenna*), vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardi*), these species are restricted to isolated rock out-crop waterbody depressions at Vasco Caves and Brushy Peak Regional Preserves (Federal Register: August 11, 2005 – Volume 70, Number 154). We have not documented any of these crustaceans in other waterbody sites. In addition, these rock out-crops are protected features and have not been impacted by anthropogenic effects associated with any project. While routine maintenance projects have occurred in the distributional range of these species, none of the projects have impacted any waterbodies known to support these species. Only one project occurred in critical habitat designation. However, it was within a high gradient seasonal stream which is considered not suitable aquatic habitat to support these species.

Many of the District's shoreline units are within the distributional range of California clapper rail (*Rallus longistrostris obsoletus*) and salt marsh harvest mouse (*Reithrodontomys raviventris*). The California clapper rail successfully nests at several shoreline units, most notably at Hayward and Martin Luther King Jr. Regional Shorelines where the dense vegetative cover supports high rail densities. Similarly, the salt marsh harvest mouse have been documented at Coyote Hills, Hayward Marsh, Salt Marsh Harvest Mouse Preserve, Oro Loma Marsh, Emeryville Crescent, Hoffman Marsh, Martinez East, Pittsburg West, and Waterbird (Shell) Marsh. These salt water emergent marshes are pickleweed (*Salicornia virginica*) dominated sites which provide habitat for the salt marsh harvest mouse. Typical routine maintenance projects along our shorelines have consisted of protecting or repairing existing levees and upland structures. During the eleven year permit periods, seven routine projects were completed in potentially suitable habitat and only one project resulted in 0.07 acres of permanent wetland loss within the distributional range of the California clapper rail. An additional 0.05 acres of wetlands were temporarily impacted during the construction period of replacing rip-rap on outboard eroded levees with no vegetation. Likewise, during this period, five routine projects were completed in distributional range of salt marsh harvest mouse and temporarily impacted 0.10 acres of potentially suitable habitat along levees. However, the vast majority of these maintenance project sites were along out-board exposed levees in areas where we have not documented California clapper rail or salt marsh harvest mouse in locations with suitable habitat to support these species.

The north eastern shoreline edge of Contra Costa County is just within the distributional range of the giant garter snake (*Thamnophis gigas*). Although Big Break Regional Shoreline contains suitable habitat to support this species, we have not documented giant garter snake at the shoreline. Moreover, no routine maintenance projects have occurred in this region with aquatic or terrestrial habitat potentially suitable for this species.

District shorelines from Suisun Bay to the Delta Region of the San Joaquin River are in the distribution range of Delta smelt (*Hypomesus transpacificus*) which occupy and disperse into stream channels and tidal backwater sloughs. During the eleven year permit period, four routine projects were completed in potentially suitable habitat and only one project resulted in 0.009 acres of permanent wetland loss within the distributional range of Delta smelt. An additional 0.01 acres of wetlands were temporarily impacted during the period of construction to replace existing rip-rap, culvert, and flapper gate. All four of these projects occurred in critical habitat designation for Delta smelt (Federal Register: December 19, 1994 – Volume 59, Number 242). However, these routine maintenance projects did not impact any submerged or emerged aquatic vegetation and had minimal disturbance or adverse affect to Delta smelt habitat.

The District's shorelines and several parklands are in watersheds with steelhead (*Oncorhynchus mykiss*) and Chinook salmon (*Oncorhynchus tshawytscha*), most notably in lower Alameda Creek and Delta Regions along the San Joaquin River. Though during the eleven year permit periods many routine maintenance projects have been performed in drainages and streams, none have occurred in reaches occupied by these salmonids or considered active spawning corridors. While six routine maintenance projects resulted in 0.07 acres of permanent wetland loss were completed in potentially suitable esturine salmonid habitat along shorelines of San Francisco and Suisun Bays, these projects consisted of protecting or repairing existing levees and flap gate structures. Additionally, the vast majority of rip-rap was placed above mean high water line with minimal affect to steelhead and Chinook salmon habitat.

Critical habitat designation for salmonids including steelhead and Chinook salmon has been determined throughout various regions of the San Francisco Bay Region (Federal Register: September 2, 2005 – Volume 70, Number 170 and Federal Register: January 5, 2006 – Volume 71, Number 3). However, the streams and drainages within District lands, including previously occupied steelhead habitat areas of Wildcat Creek and upper Alameda Creek are not considered Distinct Population Segments or included in the

critical habitat designation (Federal Register: September 2, 2005 – Volume 70, Number 170 and Federal Register: January 5, 2006 – Volume 71, Number 3). Similarly, District lands are not included in the critical habitat designation for Chinook salmon (Federal Register: September 2, 2005– Volume 70, Number 170). Nevertheless, the District has removed several migratory barriers and been very involved in efforts to re-establish an anadromous steelhead and possibly Chinook salmon to upper Alameda Creek.

Contra Costa goldfields *(Lasthenia conjugens)* are habitat limited to vernal pools in open grassy areas at elevations up to 470 meters. Although several Contra Costa goldfield populations are included in critical habitat designation (Federal Register: August 11, 2005 – Volume 70, Number 154), none of the sites are within District lands. In addition, we have not documented or confirmed any individual plants or populations of Contra Costa goldfields on District lands. Thus, routine maintenance projects have not impacted Contra Costa goldfields or critical habitat designation.

Soft bird's-beak *(Cordylanthus mollis ssp. mollis)* occurs on the upper reaches of coastal salt marshes, primarily at the limits of tidal influence. It is associated with *Salicornia virginica, Distichlis spicata, Jaumea carnosa, Frankenia salina, and Triglochin maritima.* The only District population occurs on the transition zone between shoreline sand and the pickleweed (*Salicornia virginica*) marsh along the northeast corner of Point Pinole Regional Shoreline, a location where no routine maintenance activities have occurred.

Here are other federally listed species that occur within Alameda and Contra Costa Counties and potentially on District lands and various project sites.

Santa Cruz tarplant *(Holocarpha macradenia)*
Large-flowered fiddleneck *(Amsinckia grandiflora)*
Presidio clarkia *(Clarkia franciscana)*
Antioch Dunes evening primrose *(Oenothera deltoides ssp. howellii)*
Pallid manzanita *(Arctostaphylos pallida)*
Alameda whipsnake (*Masticophis lateralis euryxanthus*)
Western snowy plover (*Charadrius alexandrinus nivosus*)
California least tern (*Sterna antillarum browni*)
San Joaquin kit fox (*Vulpes macrotis mutica*)

These additional nine species could potentially occur at various proposed routine maintenance project sites within the East Bay Regional Park District. However, most of these species, except for the Western snowy plover and California least tern, are generally associated with upland habitats. Moreover, excluding the Alameda whipsnake, these species have limited distributional range and/or occurrence on District lands.

Santa Cruz tarplant *(Holocarpha macradenia)* is found on coastal prairies and grasslands, often with clay or sandy-clay soils, between 10 meters and 220 meters elevations. This species is most frequently associated with non-native grasses and non-native French broom (*Genista monpessulana*). Several transplanted populations of Santa Cruz tarplant occur in the non-native annual grasslands of Wildcat Canyon Regional Park. This introduced Santa Cruz tarplant population is within critical habitat designation (Federal Register: October 16, 2002 – Volume 67, Number 200). However, no routine maintenance projects have occurred in this region with known populations or habitat potentially suitable for this species. Nevertheless, for many years the District has been implementing various management actions at the Santa Cruz tarplant population site to enhance the primary constituent elements to improve habitat conditions for this species.

Large-flowered fiddleneck *(Amsinckia grandiflora)* normally occurs in inner coast range grasslands with steep slopes and sandy soils. The only District population was planted on a relatively small site in a non-native annual grassland ridgetop within Black Diamond

Mines Regional Preserve. Moreover, no routine maintenance projects have occurred in this region with known populations or habitat potentially suitable for this species.

Presidio clarkia *(Clarkia franciscana)* grows in grassland communities with serpentine soils. The only District occurrence is a large population on the serpentine prairie of Redwood Regional Park. However, no routine maintenance projects have occurred in this region with known populations or habitat potentially suitable for this species. Instead, the District has implemented various management actions at the serpentine prairie site to enhance the primary constituent elements to improve habitat conditions for Presidio clarkia.

Antioch Dunes evening primrose *(Oenothera deltoides ssp. howellii)* occurs on inland sand dunes. The only District occurrence is a small population on the Southwest side of Browns Island in Contra Costa County. However, no routine maintenance projects have occurred in this region or where known populations exist.

Pallid manzanita *(Arctostaphylos pallida)* occurs in chaparral communities with somewhat mesic soils and in coastal scrub, with an elevation range of 200-445m. These soils are generally thin, silica-rich shales. Large populations (>450 individuals) are found in Huckleberry Botanic Preserve and Sobrante Ridge Regional Preserve. About 20 planted pallid manzanitas occur in Tilden Regional Park, and a single plant is found in both Redwood Regional Park and Sibley Volcanic Regional Preserve. However, no routine maintenance projects have occurred in any area with known populations.

The Alameda whipsnake (*Masticophis lateralis euryxanthus*) typically inhabits District parks throughout Alameda and Contra Costa Counties with suitable chaparral, scrub, and oak savanna habitats. This species is closely associated with these uplands habitats but also occurs in riparian and stream corridors. Vast regions of District lands are excluded from critical habitat designation for Alameda whipsnake (Federal Register: October 3, 2000 – Volume 65, Number 192 and Federal Register: October 2, 2006 – Volume 71, Number 190). While 221 routine projects were completed within the distributional

range of the Alameda whipsnake, these projects involve various aquatic habitat types and often in mesic locations without the essential primary constituent elements to support this species. Furthermore, most of these maintenance activities have occurred in areas where we have not documented Alameda whipsnake and had minimal disturbance to suitable upland habitat.

Historically, Western snowy plover (*Charadrius alexandrinus nivosus*) and California least tern (*Sterna antillarum browni*) infrequently occurred and had very limited nesting on District properties. Western snowy plovers nesting attempts at Hayward Regional Shoreline were restricted to an event on Island 5 and one nest attempt on the basin levee. Similarly in 1990, only one nest attempt was documented by California least terns on the same small island at Hayward Regional Shoreline. However, after the District completed a habitat enhancement project on Island 5, California least terns have successfully nested every year since 2007 and appears to have established a stable colony. Correspondingly, on Island 5, Western snowy plover successfully nested in 2008 and each of the subsequent years. During the eleven year permit periods, only two routine maintenance projects were completed at Hayward Regional Shoreline. While these projects resulted in 0.04 acres of temporary and permanent wetland impacts, both projects were on levees at considerable distances from the island supporting Western snowy nests and the California least tern colony. In addition, the construction occurred during the non-nesting season with no disturbance to either species. As a consequence, none of the projects or associated routine maintenance activities impacted Western snowy nests or the California least tern.

The eastern portions of Alameda and Contra Costa Counties are the extreme northern extent of the San Joaquin kit fox (*Vulpes macrotis mutica*) range. This species typically occur in xeric upland habitats, predominantly in the open grassland and oak savanna. Since 1990 only eight San Joaquin kit fox have been documented on District lands with occurrences at Black Diamond Mines, Round Valley, Brushy Peak, and Vasco Caves Regional Preserves. Considering, San Joaquin kit fox are associated with xeric upland habitats, their extremely low density throughout Alameda and Contra Costa Counties,

and the routine maintenance projects occur in aquatic habitats with little disturbance to uplands, it is unlikely the project activities had a measurable effect or impact San Joaquin kit fox habitat.

Summary and Discussion

The proposed activities associated with District's routine maintenance activities including bank stabilization, maintenance and minor modifications of existing boat docks-marinas, installation and maintenance of existing clear-span bridges, replacement and upgrades of existing culverts, minor maintenance dredging of silt basins, and levee maintenance appear to meet the criteria described in the U.S. Army Corps of Engineers programmatic consultation with U.S. Fish and Wildlife Service and NOAA-National Marine Fisheries Service. The District currently manages 66 regional parks, recreation areas, wilderness lands, shorelines, preserves, and land bank areas that encompass over 102,000 acres in Alameda and Contra Costa Counties. Approximately 80 percent of District lands are protected and operated as natural parklands which provide potential habitat for 22 federally listed species. This eleven year Regional General Permit analysis illustrates that the District's routine maintenance projects had minimal direct, indirect, and cumulative effects to these species. In effect, most temporary disturbance and permanent aquatic loss were largely limited within California red-legged frog habitat, with little effect to other aquatic and upland habitats potentially supporting other species.

In addition, many routine maintenance projects that quantitatively resulted in permanent wetland loss, actually improve habitat conditions by restoring natural flow regimes, reducing stream and shoreline erosion, minimizing sediment loading, and maintaining open water conditions. Projects such as replacing culverts with armored fords or clear-span bridges have daylighted stream reaches, prevented scouring, and often improved the hydrological conditions and lotic habitat suitability for California red-legged frog, Delta smelt, steelhead, and Chinook salmon. Other projects such as the stabilization of

existing levees actually protect several shoreline restoration sites including Oro Loma Marsh, Cogswell Marsh, and Hayward Marsh which provide habitat for California clapper rail, California least tern (i.e. Island 5), Western snowy plover (i.e. Island 5), and salt marsh harvest mouse.

Moreover, the District have conducted these routine maintenance projects with a variety of best management practices to avoid and minimize potential adverse affects to listed species (Attachment C). They include but are not limited to the following: Within the distributional range of California red-legged frog and/or California tiger salamander work is performed between August 1 and October 31 or under dry site conditions to avoid potential impacts to aquatic habitats and vulnerable life stages. Similarly, to avoid and minimize potential impacts to California clapper rail, Western snowy plover, and/or California least tern, routine maintenance activities are conducted during the non-nesting season (September 1 to January 1).

On August 6, 1998 the U.S. Fish and Wildlife Service concurred with the US Army Corps of Engineers determination that the District's routine maintenance activities performed under the Regional General Permit are not likely to impact the California red-legged frog (enclosed). In addition, U.S. Fish and Wildlife Service critical habitat designation for California red-legged frog (Federal Register: April 13, 2006 – Volume 71, Number 71 and Federal Register: March 17, 2010 – Volume 75, Number 511) and critical habitat designation for California tiger salamander (Federal Register: August 23, 2005 – Volume 70, Number 162) includes a Special 4d rule exemption for existing routine ranching activities including maintenance of existing waterbodies and water sources created to provide water for livestock. Also on May 5, 1998 the District received a Technical Assistance from U.S. Fish and Wildlife Service that determined the effects of annual road grading and maintenance activities of existing roads and trails are not likely to result in the take of Alameda whipsnake (enclosed).

Within the District's Master Plan 1997, the "conservation of rare, threatened, and endangered species of plants and animals and their supporting habitats will take

precedent over all other activities". Accordingly, District biologists are involved in the recovery of federally listed species. We have provided information and participated on the California red-legged frog Recovery Plan, developing the survey protocol, and critical habitat designations; California tiger salamander federal and state listing petitions and critical habitat designations; California clapper rail, salt marsh harvest mouse, and San Joaquin kit fox Recovery Plans; Alameda whipsnake Recovery Plan and critical habitat designation; steelhead, Chinook salmon and Santa Cruz tarplant critical habitat designations. In addition, we continue to conduct research and work with USFWS and NMFS biologists to assist in the conservation and recovery of steelhead, California red-legged frog, California tiger salamander, Alameda whipsnake, California clapper rail, California least terns, Western snowy plover, San Joaquin kit fox, Presidio clarkia, large-flowered fiddleneck, and Santa Cruz tarplant.

Because the District's routine maintenance projects are extremely small scale and work activities are performed with best management practices (Attachment C) which includes very specific avoidance measures to minimize potential impacts to listed species and their habitats, we believe it is unlikely the District's proposed routine maintenance activities would adversely affect these 22 federally listed species, any distinct population segment, evolutionary significant unit, or critical habitat designation.