

## **Exhibit A:** Compensation Planning Framework

**The Compensation Planning Framework (§§332.8(d)(2)(viii)(A) & 332.8 (c))**

Strategies that will be used by the RCRCD to select, secure and implement aquatic resources will involve the following.

(a) **Section 332(c)(2)(i): The geographic service area, including a watershed-based rationale for the delineation of each service area.**

The geographic service area falls within the Santa Ana River Watershed. This watershed has lost many of its aquatic functions and values from external impacts in the watershed. Consequently, there are specific restoration needs within the watershed. In using this watershed as the basis for the Program, impacts within this watershed would be offset by compensatory mitigation within the same watershed, promoting the goal of no-net loss of functions on a watershed basis.

A watershed-based rationale for the creation of each proposed conservation area described in this section will be based upon what resources (wetland, riparian, ephemeral) would be best protected and how those resources would be conserved through the purchase and creation of new conservation easements and by restoring conservation easements that do not have sufficient funds for long term maintenance or restoration. Since many of the proposed conservation areas are in sub watersheds of the Santa Ana River, (see subunits and sub watersheds table 1) conserving and managing these lands through a series of conservation easements would best protect the resources for the long-term since many of these areas are on private lands with little or no current protection.

Under section 1900 of the State of California Fish and Game code, it states that *“the maintenance of sufficient populations of all species of aquatic organisms to insure their continued existence shall be made and that areas containing diverse ecological and geological characteristics are vital to the continual health and well being of the state's natural resources and of its citizens.”*

*“There is insufficient incentive for private landowners to maintain and perpetuate significant local natural areas in their natural state. (d) Efforts to preserve natural areas have been fragmented between federal, state, local, and private sectors. The Legislature further finds and declares that it is the policy of this state to encourage the cooperation of federal, state, local, and private sectors, including private organizations and individuals, in efforts to maintain the state's most significant natural areas.”* (DFG code sec. 1900-1930).

Protection of such lands in contiguous conservation easements in cooperation with the landowner will allow the RCRCD to secure and implement aquatic resource conservation by reducing threats to aquatic resources in these areas through the creation and management of these easements.

According to the Santa Ana Watershed Project Authority (SAWPA) Integrated Watershed Management Plan (see <http://www.sawpa.org/owow-generalinfo.html>), “Many water bodies of the mountains and coastal plains connect and wind their way through the alluvial fans and arroyos of the watershed. This network provides lush habitat in southern California’s otherwise semi-arid environment, cleans runoff before it reaches downstream shorelines, and provides opportunities for recharging precious groundwater basins along the way. Keeping the network of stream channels healthy as functioning habitat also keeps it



functioning optimally in providing other benefits.” (SAWPA IWMP, p. 11.) These habitat functions and values will be increased or maintained through the ILF program.

Table 1 - Hydrologic Boundaries, Subareas and Subunits – Santa Ana River Watershed within the RCRC service area proposed for the Program.

Watershed	DWR Unit #	Number of Established RCD C.E.s	Acres Proposed for ILF Program
Middle Santa Ana Hydro Subunit	Y – 1.B0	6	To be determined through the ILFP.
Temescal Hydro Subarea	Y – 1.B5	5	TBD
Arlington Hydro Subarea	Y – 1.B6	0	TBD
Riverside Hydro Subarea	Y – 1.B7	0	TBD
Lake Mathews Hydro Subunit	Y – 1.C0	2	TBD
Coldwater Hydro Subarea	Y – 1.C1	0	TBD
Bedford Hydro Subarea	Y – 1.C2	0	TBD
Cajalco Hydro Subarea	Y – 1.C3	1	TBD
Lee Lake Hydro Subarea	Y – 1.C4	0	TBD
<b>Totals</b>	<b>9</b>	<b>14</b>	<b>TBA</b>

The watershed-based rationale for each proposed conservation area is described below (§332.8 (c)(2)(i)).

**(All proposed areas and sub-watersheds fall within the USGS 18070203 watershed unit.)**

- 1. Bedford Wash** – Bedford Wash is contained in the Lake Mathews Hydro Subunit and within the Bedford Hydro subarea, which falls within the Santa Ana Watershed. Approximately 20 total acres.
- 2. Lower Coldwater Creek** – Coldwater Creek falls within the Coldwater Hydro Subarea and in the Lake Mathews Hydro Subunit, Santa Ana Watershed. Approximately 18 total acres.
- 3. Horsethief Creek** – Horsethief Creeks falls within the Lee Lake Hydro Subarea and in the Lake Mathews Subunit, Santa Ana Watershed. Approximately 12 total acres.
- 4. Dawson Canyon and unnamed tributaries** – Dawson Canyon falls within the Cajalco Hydro Subarea and in the Lake Mathews Hydro Subunit, Santa Ana Watershed. Approximately 50 total acres.
- 5. Lower Temescal Creek** – Lower Temescal Creek is within the Temescal Hydro Subarea and part of the Middle Santa Ana Hydro Subunit. Approximately 125 total acres.
- 6. Upper Temescal Creek and unnamed tributaries** – Upper Temescal Creek falls within the Lee Lake Hydro Subarea and in the Lake Mathews Hydro Subunit, Santa Ana Watershed. Approximately 100 total acres.
- 7. Arlington Creek** – Arlington Creek falls within the Arlington Hydro Subarea and in the Middle Santa Ana Hydro Subunit, Santa Ana Watershed. Approximately 15 total acres.
- 8. La Sierra and McAllister Creeks** – Both of these creeks fall within the Riverside Hydro Subarea and the Middle Santa Ana Hydro Subunit, Santa Ana Watershed. Approximately 20 total acres.



- 9. Goldenstar Creek** – This creek falls within the Riverside Hydro Subarea and the Middle Santa Ana Hydro Subunit, Santa Ana Watershed. Approximately 12 total acres.
- 10. Olsen Canyon** – Olsen Canyon falls within the Cajalco Hydro Subarea and the Lake Mathews Hydro Subunit, Santa Ana Watershed. Approximately 8 acres.
- 11. Springbrook Wash** – This wash falls within the Riverside Hydro Subarea, Middle Santa Ana Hydro Subunit, Santa Ana Watershed. Approximately 25 total acres.
- 12. McBride Canyon** – This canyon falls within the Bedford Hydro Subarea, Lake Mathews Hydro Subunit, Santa Ana Watershed. Approximately 19 total acres.
- 13. McBride Flood Control Pond** – This pond habitat falls within the Bedford Hydro Subarea, Lake Mathews Hydro Subunit, Santa Ana Watershed. Approximately 2 total acres.
- 14. Reche Canyon and unnamed tributaries** – This ephemeral drainage falls within the Riverside Hydro Subarea, Middle Santa Ana Hydro Subunit, Santa Ana Watershed. Approximately 7 total acres.
- 15. Brown Canyon** – This ephemeral oak woodland falls within the Coldwater Hydro Subarea, Lake Mathews Hydro Subunit. Approximately 10 total acres.
- 16. Cajalco Creek and unnamed tributaries**– This creek falls with in the Cajalco Hydro Subarea and the Lake Mathews Hydro Subunit, Santa Ana River Watershed. Approximately 40 total acres.
- 17. Mockingbird Creek and unnamed tributaries**– This creek and its tributaries fall within the Arlington Hydro Subarea, Middle Santa Ana Hydro Subunit, Santa Ana River Watershed. Approximately 50 total acres.
- 18. Box Springs Creek** – This creek falls within the Riverside Hydro Subarea and the Middle Santa Ana Hydro Subunit, Santa Ana River Watershed. Approximately 5 total acres.
- 19. Grand Terrace Wetlands** – This drainage area falls within the Riverside Hydro Subarea and the Middle Santa Ana Subunit, Santa Ana River Watershed. Approximately 6 acres.
- 20. Main Street Canyon** – This watershed falls within the Arlington Hydro Subarea, Middle Santa Ana Hydro Subunit with approximately 27 acres.
- 21. Sycamore Canyon** – This drainage area falls within the Coldwater Hydro Subarea, Lake Mathews Hydro Subunit with approximately 4.5 acres.
- 22. Tagorada Conservation Easement** - This established .34 conservation easement falls within the Mockingbird watershed and requires .34 acres of restoration in the Cajalco Hydro Subarea, Lake Mathews Hydro Subunit.
- 23. Lee Lake Conservation Easement** – This established conservation easement contains 9 acres of habitat that falls within the Temescal Hydro Subarea and the Middle Santa Ana Hydro Subunit, Santa Ana Watershed and has 8.03 acres of enhancement and 0.95 acres of restoration.
- 24. Temescal Open Space** – This site has 8.50 acres of habitat in the Cajalco Hydro Subarea and the Lake Mathews Hydro Subunit, Santa Ana Watershed. The easement has 1.60 acres of restoration, 1.50 acres of enhancement and 5.4 acres of buffer.



**25. Chandler Easement** – This site occurs in the Cajalco Hydro Subarea and is part of the Lake Mathews Hydro Subunit. The easement consists of 2.76 acres of preservation, 2.20 acres of enhancement and 0.54 acres of restoration.

(b) **Section 332.8(c)(2)(ii): A description of the threats to aquatic resources in the service area (Santa Ana watershed basin), including how the in-lieu fee program will help offset impacts resulting from those threats;**

The types of impacts expected stem from several sources, which will occur in the near future. Typical permit actions with minor amounts of impact have included maintenance, outfall structures, utility lines, temporary construction access, and storm water management. These types of activities would continue to have an extremely limited impact on aquatic resources. Activities with more substantial impacts include flood management activities, linear transportation projects, residential, commercial and institutional developments. The Program would help offset these impacts through more intelligent decision-making of compensatory mitigation through a watershed approach. The functions and values lost would be offset in a manner that would create a greater likelihood of restoration success.

Specific needs within the watershed would be identified and compensatory mitigation would be directed at these areas. Consideration of nearby landscape stressors would allow for more effective site-selection in order to reduce indirect effects of surrounding land uses (buffers) on particular habitat functions. Under the Santa Ana Watershed Project Authority Integrated Watershed Management Plan, many of the upper drainages are strewn with boulders and characterized by sand and gravel washes, such as Temescal Canyon. Within these areas, “the transport and depositional processes are less confined by higher terrain as water, dissolved material, and sediment move toward the sea. Over time, aquatic and terrestrial wildlife have adapted to this dynamic process. However, rapid urbanization has artificially increased the rate of sedimentation and loss of habitat in this part of the watershed, negatively affecting water quality and wildlife habitat.” (SAWPA, IWMP, p. 52.)

By helping to ensure these lands are properly managed, the ILFP will have the opportunity to increase aquatic resource values by targeting areas that require more intensive management strategies. Ecosystem restoration can include changing the flows in streams and rivers; restoring fish and wildlife habitat and controlling waste discharges.

Under the SAWPA Integrated Watershed Management Plan, “a prerequisite for any project is the sustained ability for the watershed to maintain the functions and processes that support the native ecology of the watershed. This does not imply that the goal is to return the watershed to an undisturbed condition. Instead it implies an integration of human needs and ecological condition that allows the watershed to sustain ecological integrity over time while providing for sustainable community needs. It is recognized that watersheds are dynamic and the precise makeup of plants, animals, and other characteristics will change over time. Watershed management seeks to balance changes in community needs with these evolving ecological conditions.” (SAWPA, IWMP, p. 440.)

Once established, the RCRCDD will conduct preliminary monitoring of the priority service area sites to determine current aquatic resource conditions, functional values and approximate acreages to be restored, enhanced or created and to determine occupation by listed and sensitive species. All of the acreages listed under the ILFP in table 2 will be conserved in easements or other appropriate legal mechanisms established through the program and, thus, will receive management based upon their condition determined at the time of acquisition.



(c) **Section 332.8(c)(2)(iii): An analysis of historic aquatic resource loss in the service area (Santa Ana watershed basin).**

Over the last 100 years, the Santa Ana Watershed and its associated tributaries have come under increased stress. Aquatic losses from these drainages has been dramatic during that time and as noted by Moyle (2002), “most of California’s inland waterways today bear little resemblance to the streams and lakes encountered by the first European explorers and settlers.” (SAWPA IWMP, p. 56.) In the watershed, this observation is true as flood control and channelization activities have left portions of these drainages channelized where once riparian gallery forests grew along a meandering stream. These impacts have reduced riparian areas in the watershed by more than 80% (Swift et al) and the remaining habitats are fragmented, degraded and do not provide the functional values they once did. Historic losses have come from:

- Stream channel alteration;
- Draining of streams, lakes and adjacent wetlands;
- Livestock grazing in riparian areas, sedimentation, and water pollution;
- Improper agricultural practices;
- In-stream aggregate mining; and

Watershed changes resulting in cumulative affects to aquatic resources These impacts have combined to reduce the functions and values of aquatic resources in both the Santa Ana River mainstem and its tributaries. Some watersheds have been impacted more than others, especially those that occur within a municipality or urban area such as Temescal Wash and Mockingbird Canyon. Chronic elevated water temperatures and high sediment loads are examples of water pollution that is not source-oriented and harder to control. The SAWPA Integrated Watershed Management Plan states that “Other examples of aquatic losses include elevated but non-toxic levels of ammonia, increases in salinity, and low levels of dissolved oxygen (DO).” (SAWPA IWMP, p. 61.) Because native freshwater fishes mostly live in treated wastewater discharges in many of the creeks and streams, the issue of chronic low-level pollution is of great concern to biologists. Increases in the amount and quality of aquatic and riparian vegetation would improve the capacity of these waterways to reduce the amounts and concentrations of many of these pollutants.

(d) **Section 332.8(c)(2)(iv): An analysis of current aquatic resource conditions in the service area (Santa Ana watershed basin), supported by an appropriate level of field documentation.**

In addition to the analysis of current aquatic resource conditions presented for each proposed conservation area, the following documentation is provided for additional support.

- a. Aquatic resources are threatened by non-point source water pollution, off-road use, dumping, invasive species (both aquatic and terrestrial) and the decline and removal of native vegetation as well as other activities listed in Section C above. By creating conservation easements on selected lands, the natural resource values of that land can be protected and become inline with DFG guidelines as stated above. Within the Santa Ana watershed (USGS hydrologic units 18070203 and 18070202) which include the middle Santa Ana hydro subunit and associated sub areas (Temescal, Arlington and Riverside) and the Lake Mathews hydro subunit and associated sub areas (Coldwater, Bedford, Cajalco, Lee Lake). Many of these drainages have no long-term protection. By securing conservation easements in these areas, aquatic threats can be reduced or discouraged by preventing dumping, off-road damage, invasive species trapping, invasive plant species removal and promoting natural vegetation succession.



b. Historic aquatic losses have come from the removal and degradation of both riparian and ephemeral habitats. The no-net-loss of wetlands and other nationally based programs have tracked large reductions in wetland and riparian acreage over the last decade. According to the Status and Trends of Wetlands report by the US Fish and Wildlife service; between 1950 and 1970, over 400,000 acres of wetlands were lost in the United States, and between 1980 and 2000, the rate declined to 290,000 per year, partially due to the passage of the Emergency Wetlands Resources Act of 1986. Between 2000 and 2008, an eighty percent decrease in losses to 58,000 acres was achieved. Although this is still a staggering number, it shows a decrease in lands lost with those losses attributed to a lack of enforcement, protection and education of the public about the value and function of wetlands on private lands. Of the wetlands remaining in the RCRCD jurisdictional area, ninety percent are inland freshwater and shrub wetlands, with only 10% of that area still remaining.

c. Current aquatic resource conditions in the RCRCD jurisdictional area are poor to good, depending upon the location. From 1985 to 2000, “30% of the estimated freshwater wetland losses were due to urban development”. (Status and Trends of Wetlands, US Fish and Wildlife Service Report, 2000). This national trend has also been seen in the Inland Empire and continues today, but at a slower rate due to the economic conditions of the housing market. The following species have been identified as sensitive, rare, threatened, or endangered by the US Department of Interior, the California Department of Fish and Game, and have been included in the Riverside County Multiple-Species Habitat Conservation Plan (MSHCP). Federally listed endangered or threatened species (FE, FT) and State listed endangered or threatened species (SE, ST) are protected.

Some species are considered sensitive by federal or state agencies and are designated as species of special concern (FSC or SSC, respectively), or candidate species for listing (C). Some of these are rare and have protected status in the state (SP). In addition, the California Native Plant Society publishes a list of rare, threatened, and endangered plants and those that are particularly sensitive and rare are listed as 1A or 1B under the California Environmental Quality Act (CEQA). The Multiple-Species Habitat Conservation Plan (MSHCP) includes many unlisted sensitive species (e.g., CNPS, SSC, C, and other locally recognized sensitive species) in its plan, because with further habitat loss, they may become candidates for listings as threatened or endangered. The RCRCD will also follow these plans during the course of its activities in the proposed conservation areas and will monitor these species when they occur.

All species listed below with FE, FT, SE, ST, SSC status, are in the MSHCP. The absence of other MSHCP species does not indicate that they can't be found in the District. The species listed are those with recent documentation, (within the last ten years).

## **CRUSTACEANS**

Riverside Fairy Shrimp (*Streptocephalus wootoni*) FE

## **INSECTS**

Quino Checkerspot Butterfly (*Euphydryas editha quino*)

FE Delhi Sands Flower-Loving Fly (*Rhaphiomidas terminatus abdominalis*) FE

## **FISH**

Arroyo Chub (*Gila orcutti*) SSC

Santa Ana Speckled-Dace (*Rhinichthys osculus ssp.*) SSC

Santa Ana Sucker (*Catostomus santaanae*) FT

Rainbow Trout (*Oncorhynchus mykiss*)



## AMPHIBIANS

Southwestern Arroyo Toad (*Bufo microscaphus californicus*) FE, SSC

California Red-Legged Frog (*Rana aurora draytonii*) FT

Western Spadefoot Toad (*Sub [=Scaphiopus] hammondi intermontanus*) SSC

Western Pond Turtle (*Clemmys marmorata*) FT, SSC

Coast Range Newt (*Taricha torosa torosa*) SSC

California Slender Salamander (*Batrachoseps attenuatus*) SSC

## PLANTS

Munz's Onion (*Allium munzii*)

Chocolate Lilly (*Fritillaria biflora*)

Thread-leaved Brodiaea (*Brodiaea filifolia*)

The types, locations and approximate amounts of wetland, riparian and ephemeral habitats in the RCRC jurisdictional area need to be determined through detailed site visits that will assess the actual amount and type of habitats that are available in the proposed conservation easement areas. Since this will require hundreds of hours as well as GPS and GIS data points, this activity will be provided under the Program when approved. It is anticipated that credit sales would provide sufficient funds to conduct these necessary activities.

- (e) **Section 332.8(c)(2)(v): A statement of aquatic resource goals and objectives for the Santa Ana watershed basin, including a description of the general amounts, types and locations of aquatic resources the program will seek to provide.**

The goal of the Program is the rehabilitation or re-establishment (collectively known as restoration) of lost aquatic resource functions of riverine ecosystems, particularly as they relate to habitat, water quality, and flood control purposes. Rehabilitation or re-establishment are preferred because of the greater likelihood of success. In some cases, enhancement would be chosen if the functional benefits are clear and apparent. Lastly, establishment (creation) could be an option, but not as likely given the difficulties of trying to establish riverine systems in areas with very limited hydrology to successfully provide this type of credit. In locations with appropriate hydrology, creation will be considered.

The proposed sites all fall within the SAWPA Integrated Watershed Management Plan for the Santa Ana River and provide aquatic resource values as they relate to water quality. All of the proposed service areas have ephemeral or perennial water resources that filter water flows from flood events and provide seasonal water sources that otherwise would not be present. Many of these areas will be enhanced by the planting of wetland plants that provide water-filtering benefits and that also provide sediment control through the growth of root masses.

According to the SAWPA Integrated Watershed Management Plan, “discharges from publicly owned treatment works (POTWs) have changed natural surface flows and provide base flows in many parts of the river’s drainage network. This treated wastewater has altered the natural system by providing year-round river flow. As populations have increased, urban runoff and wastewater flows have increased. Between 1970 and 2000, the total average volume rose from less than 50,000 to over 146,000 AFY, as measured at Prado Dam. Base flow is expected to rise to 370,000 AFY by 2025, a projected increase of 153% since 1990.” (SAWPA IWMP, p. 51.) These circumstances have also changed the way in which habitat management in these waterways is conducted and the rate at which these habitats grow. For example, tertiary treated wastewater is discharged into the Temescal Creek watershed at various rates year-round.



Other water sources are natural springs, seeps, urban runoff and groundwater. These all contribute to the location, density and structure of riparian and wetland vegetation. The types, locations and approximate amounts of wetland, riparian and ephemeral habitats in the service area are provided on the following pages. Descriptions of each proposed conservation area, the resources, threats, conditions and potential aquatic resources are listed in no particular order.



**Location:** **Bedford Wash**, Temescal Canyon, Riverside Co. in the Bedford Hydro Subarea, Temescal Subunit (§332.8(c)(2)(i))

**Acreage:** Approx. 20 acres of ephemeral and alluvial sage scrub habitat preservation with 5 acres of restoration and 15 acres of enhancement.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Nearby developments and removal of farming operations for development of nearby land, dumping and invasive weeds.

**Goals:** Creation of conservation easements and restoration and enhancement of native habitat.

**Threats** to this site are from the development of the stream channel for flood control purposes, nearby development and associated runoff from housing, commercial and industrial uses. Removal of farming operations that historically reduced runoff from vegetated cropland, and an increase in exotic weed species in some areas (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from exotic weed species, manipulation of the alluvial channel for flood and farming practices and control of native vegetation through the use of herbicides. Alluvial sage scrub and ephemeral plants have been removed through equipment, herbicides and hand tools. Of the twenty acres of proposed habitat, ten acres have been degraded or removed through these activities (§332.8(c)(2)(iii)).

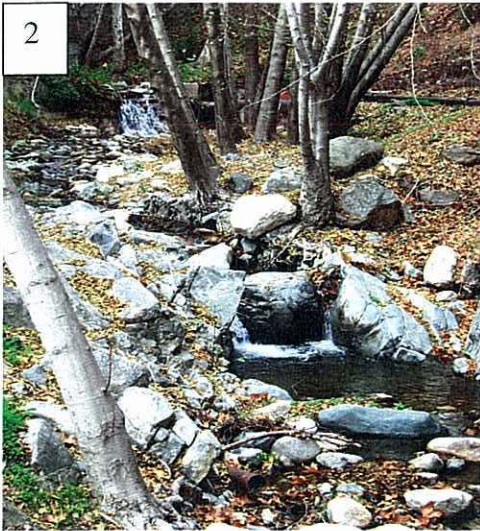
**Current aquatic resources** are poor to fair in quality and of limited size (less than 5 acres in each area). Since the site is ephemeral in nature, hydrologic functions as they relate to aquatic resources are limited to the winter and spring months when water is present due to rainfall (see also page 33) (§332.8 (c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources in the Bedford Canyon area includes the upper part of the watershed that contains mule-fat and willow scrub of 5 to 8 acres, and the lower portion being mostly alluvial sage scrub with patches of mule-fat scrub of 4 to 6 acres and the remaining 6 acres being open land or channel (§332.8 (c)(2)(v)).



Proposed Bedford Wash Conservation Easement Area.





Location: **Coldwater Creek**, Temescal Canyon, Riverside Co., CA. in the Coldwater Hydro Subarea, Temescal Subunit (§332.8(c)(2)(i))

Acreage: Approx. 18 acres of aquatic and riparian forest habitat preservation with 3 acres of restoration, 15 acres of enhancement and 4,000 linear feet of non-corps jurisdictional aquatic enhancement.

Condition: Good to Excellent (photo documented/aerials)

Threats: Nearby development, invasive plants, fire.

Goals: Creation of conservation easements enhancement and preservation of native habitat, management of aquatic species.

**Threats** to this site are from downstream development near the stream channel, invasive plants such as cape ivy and Himalayan blackberry displacing native habitat. Degradation and extirpation of in stream aquatic species and habitat due to drought, fire or direct removal (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from cape ivy and wild grape, extirpation of native fish due to drought, flood or intentional removal. Between two and three acres of streamside habitat have been lost due to invasive ivy growth and riparian tree die-off due to drought and wild grape growth (§332.8(c)(2)(iii)).

**Current aquatic resources** are good to excellent and are considered rare at this elevation and location. The site consists of alder and maple streamside woodland, willow woodland and rainbow trout habitats. In addition, the alluvial sage scrub habitat is in fair to good condition. The 18 of this type of stream habitat do not occur in any other RCRC jurisdictional area outside of the national forest. The site is considered extremely sensitive. Perennial water flow originates from snow and rain on the east side of Santiago Peak which will provide a reliable source of natural water for restoration activities ranging in amounts from 1 cubic foot in summer to over 10 cubic feet in winter. (see also page 33) (§332.8(c)(2)(v)).

**Preservation objectives**, amounts, types and locations of aquatic resources in the Coldwater Creek area include the lower reach of the Coldwater watershed that contains 18 acres of alder and maple streamside woodland and associated rainbow trout in-stream habitat that will be preserved and managed under a conservation easement that will be established under the program.

Limited planting of riparian trees and removal of exotic plants will be conducted as well as monitoring of water quality and quantity on a monthly basis (§332.8(c)(2)(v)).

Proposed Coldwater Conservation Easement Area







**Location:** **Horsethief Creek**, Temescal Canyon, Riverside Co., CA. in the Lee Lake Hydro Subarea, Lake Mathews Subunit (§332.8(c)(2)(i))

**Acreage:** Approx. 12 acres of aquatic and riparian forest habitat preservation with 12 acres of enhancement.

**Condition:** Fair to Good (photo documented/aerials)

**Threats:** Downstream development, invasive plants, fire, dumping, off-road uses.

**Goals:** Establishment of conservation easements, enhancement and preservation of native habitat, removal of trash, fencing.

**Threats** to this site are from downstream development, off road uses, illegal dumping and degradation of the stream habitat. Wild grape is killing alders in the lower stream area due to excessive growth. Non-native weeds are expanding and displacing native plants (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from exotic grasses and off-road use in the main creek channel. Between two and three acres of streamside habitat have been lost due to equipment use, off road use and some tree die-off due to wild grape growth into tree canopies (§332.8(c)(2)(iii)).

**Current aquatic resources** are fair to good and are considered rare at this elevation and location. The site consists of alder and maple streamside woodland, willow woodland and mule-fat scrub habitats. The eighteen acres of this stream habitat are considered very sensitive and only occur in higher densities in Coldwater Canyon. Perennial water flows from springs above and through the proposed conservation area. Water flows decrease during summer months, but is still adequate to maintain the alder and willow habitat. The area contains some oak woodland on the upper slopes due to spring seeps. (see also page 33) (§332.8(c)(2)(v)).

**Preservation objectives**, amounts, types and locations of aquatic resources in the Horsethief Creek area include the lower reach of the watershed that contains 12 acres of alder and maple streamside woodland and willow scrub habitat that will be preserved and managed under a conservation easement that will be established under the program. Removal and limited control of wild grape into tree canopies will be conducted as will fencing and signage to curtail off-road access. Planting and establishment of alder and maple trees will be conducted along with monitoring of water quality and quantity (§332.8(c)(2)(i)).



Proposed Horsethief Conservation Easement Area.





**Location:** **Dawson Canyon**, Temescal Canyon area, Riverside Co., CA. in the Cajalco Hydro Subarea, Lake Mathews Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** 50 acres of riparian and ephemeral habitat preservation with 15 acres of restoration, 30 acres of enhancement, 5 acres of non-corps jurisdictional oak woodland and 500 linear feet of non-corps jurisdictional aquatic enhancement.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Streamside impacts from homeowners, invasive plants, dumping, off-road use.

**Goals:** Establishment of conservation easements, enhancement and preservation of native habitat, removal of trash, prevention of fill.

**Threats** to this site are from streamside uses by homeowners, placement of fill, dredging, road culverts, illegal dumping and degradation of the stream habitat (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation, planting of non-native vegetation in the form of landscaping, off-road use in the main creek channel. Between ten and fifteen acres of streamside habitat have been lost due to off road use, removal of mule-fat scrub, manipulation of the stream channel for control of flood waters (§332.8(c)(2)(iii)).

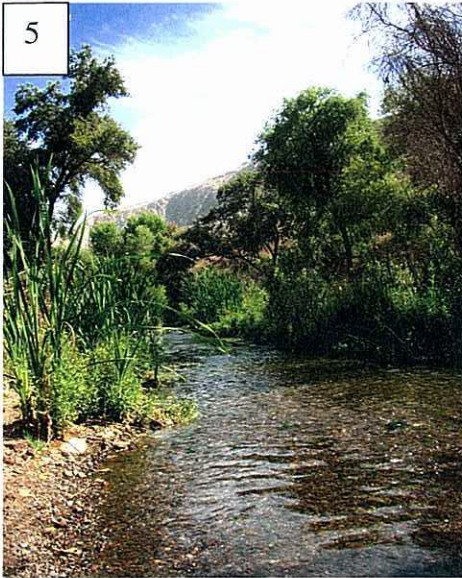
**Current aquatic resources** are poor to fair. The site consists of sycamore woodland, with mule-fat and willow scrub habitats and open cobble streambed. Perennial flows occur in the upper reaches of the canyon, with ephemeral flows in the lower half of the canyon. Flows can remain in the lower half during heavy rainfall years, but are not consistent. Flows range from .50 cubic feet to over 10 cubic feet per second, depending upon the year. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources in the Dawson Canyon area include both the upper and lower reaches of the watershed that contain 20 acres of restoration and 50 acres that will be preserved and managed under a series of conservation easements that will be established under the program. Control of weeds and planting of riparian and ephemeral habitat will be conducted as reduction in off-road access (§332.8(c)(2)(v)).

Proposed Dawson Canyon Conservation Easement Area.







**Location:** **Lower Temescal Creek**, Temescal Canyon area, Riverside Co., CA. in the Cajalco Hydro Subarea, Lake Mathews Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approx. 125 acres of riparian habitat preservation with 25 acres of restoration, 98 acres of enhancement, 2 acres of wetland creation, 2,000 linear feet of non-corps jurisdictional aquatic enhancement and 32.18 surface acres for amphibian enhancement.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Streamside impacts from mining, invasive plants, illegal dumping and off-road use.

**Goals:** Establishment of conservation easements, enhancement, restoration and preservation of native habitat, removal of trash and prevention of off-road use.

**Threats** to this site are from streamside uses by mining operations, off-road use, degradation of the stream habitat from displacement by invasive plants and dumping (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation, off-road use in the main creek channel, non-point source pollution and loss of native vegetation (§332.8(c)(2)(iii)).

**Current aquatic resources** are poor to fair. The site consists of mule-fat and willow scrub habitats with some wetland and open water areas due to groundwater infiltration in low areas and some listed species already occur in this watershed. Approximately 125 acres of this habitat type currently exist, with much of the area needing some type of restoration or enhancement. Perennial water flows from tertiary treated water during most of the year, with an estimated 10% of the flow originating from nuisance water from a nearby development. Floodwater flows in the winter months can range from 100 cubic feet to over 10,000 during heavy rainfall events. Summer flows range from 2 to 10 cubic feet, depending upon water treatment releases. These flows are expected to be reduced due to water districts reclaiming and reselling this water for landscape purposes. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources in Lower Temescal Creek include 25 acres of restoration, 98 acres of enhancement and 2 acres of wetland creation for a total of 125 acres that will be preserved and managed under a series of conservation easements that will be established under the program. Control of weeds, planting of riparian and ephemeral habitat and a reduction in off-road access (§332.8(c)(2)(v)).



Proposed Lower Temescal Canyon Conservation Easement Area.





**Location:** Upper Temescal Creek, Temescal Canyon area, Riverside Co., CA. in the Lee Lake Hydro Subarea, Lake Mathews Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approx. 100 acres of wetland and riparian habitat preservation with 50 acres of restoration, 48 of enhancement and 2 acres of creation, 6,105 linear feet of non-corps jurisdictional aquatic enhancement and 3.36 surface acres of amphibian enhancement.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Streamside impacts from gravel mining, dumping and off-road use.

**Goals:** Establishment of conservation easements, enhancement and preservation of native habitat, removal of trash, prevention of off-road use and restoration of wetland areas.

**Threats** to this site are from streamside uses from gravel mining operations, off-road use, degradation of the stream habitat from dumping (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation, loss of wetland ponds, off-road use in the main creek channel, non-point source pollution and loss of native vegetation in the amount of 25 acres due to these activities over the last twenty five years (§332.8(c)(2)(iii)).

**Current aquatic resources** are poor to fair. The site consists of sycamore woodlands with willow and mule-fat scrub plant communities. The habitat varies during the year due to winter flood events and the lower summer water flows. Water flows in this area are from tertiary treated wastewater plants upstream and from limited natural runoff. Pond areas have water from underground sources that have “surfaced” due to gravel mining. Water flows range in amount from 2 cubic feet in the summer to over 5,000 ccf during winter floods. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources in Upper Temescal Creek include 5 acres of wetland/open water restoration, 45 acres of riparian restoration, 48 acres of enhancement and 2 acres of creation for a total of 100 acres that will be preserved and managed under a series of conservation easements that will be established through the program. Control of weeds, planting of riparian and wetland habitats and a reduction in off-road access will also be provided (§332.8(c)(2)(v)).



Proposed Upper Temescal Canyon Conservation Easement Area





**Location:** **Arlington Creek**, Riverside Co., CA. in the Arlington Hydro Subarea, Middle Santa Ana Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approx. 15 acres of riparian habitat preservation and 5 acres of enhancement.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Streamside impacts from invasive plants, graffiti, non-point source pollution.

**Goals:** Establishment of conservation easements, enhancement and restoration of native habitat, removal of graffiti.

**Threats** to this site occur from streamside uses by residents, graffiti on rocks and vandalism to natural structures (rocks/trees), degradation of the stream water quality from non-point source water pollution (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation, loss of native vegetation due to cutting and non-point source pollution degrading water quality and increasing algae. Of the fifteen acres of habitat, five have been degraded or lost due to these activities (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are poor to fair. The site consists of mule-fat and willow scrub habitats. Perennial water flows originate from both rainfall and agricultural irrigation runoff from Eagle Valley. Nearby development has also contributed to increased flows to this creek. Issues with water quality may also occur and will be monitored once conservation easements are established. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources in Arlington Creek include 5 acres of enhancement and 15 acres that will be preserved and managed under a series of conservation easements that will be established through the program. Control of weeds, planting of riparian vegetation will be provided (§332.8(c)(2)(v)).

Proposed Arlington Creek Conservation Easement Area.







**Location:** **La Sierra and McAllister Creeks**, Riverside Co., CA. in the Riverside Hydro Subarea, Middle Santa Ana Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approx. 20 acres of riparian habitat preservation and 5 acres of restoration and 15 acres of enhancement.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Streamside impacts from dumping, off-road use, weeds and nearby development.

**Goals:** Establishment of conservation easements, Enhancement, restoration and preservation of native habitat, prevention of off-road use and weed control.

**Threats** to this site occur from degradation of the stream water quality from sedimentation, displacement of native vegetation by weeds, dumping and off-road use within the waterway (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from weeds, intentional removal from fire control and development of nearby home pads and housing tracts (§332.8(c)(2)(iii)).

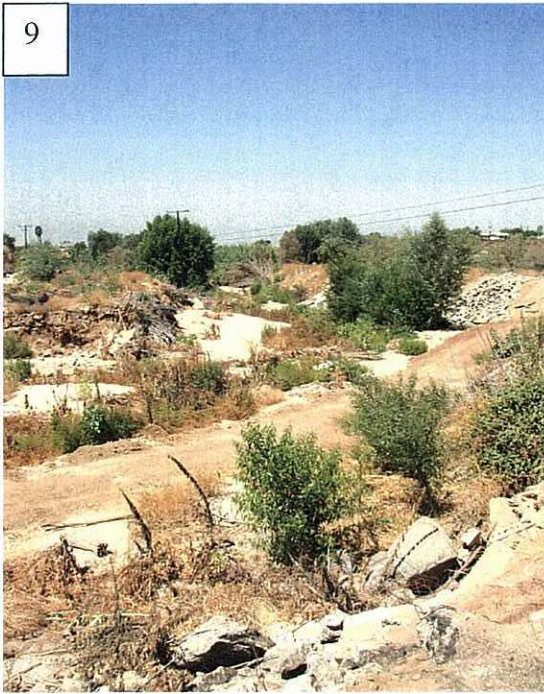
**Current aquatic resources** and their condition are poor to fair. The site consists of mule-fat and willow scrub habitats, that can be restored through the removal of weeds, planting of native trees and shrubs. Perennial water flows originate from agricultural runoff and some urban septic tank leaching. Flows are perennial but inconsistent in amount, ranging from .50 cubic feet to less than .10 cubic feet in the summer, to over 10 cubic feet during winter storms. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources include the 5 acres of riparian restoration and 15 acres enhancement with the entire area being preserved and managed under a series of conservation easements that will be established through the program (§332.8(c)(2)(v)).

Proposed La Sierra/McAllister Conservation Easement Areas.







**Location:** **Goldenstar Creek**, Riverside Co., CA. in the Riverside Hydro Subarea, Middle Santa Ana Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approx. 12 acres of riparian habitat preservation, 2.5 acres of restoration, 9.5 acres of enhancement and 1,500 linear feet of non-corps jurisdictional aquatic enhancement.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Streamside impacts from landowners, weeds, nearby development and sedimentation.

**Goals:** Establishment of conservation easements, enhancement, restoration and preservation of native habitat, prevention of off-road use, reduce sedimentation and illegal fill.

**Threats** to this site occur from degradation of the stream from sedimentation from upstream uses, displacement of native vegetation due to off-road use within the waterway, removal or native vegetation for control of floodwaters by landowners and confined hydrology from fill materials (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation by invasive weeds, intentional removal of sediment and development of nearby home pads that have impacted the stream banks (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are poor to fair. The site consists of approximately twelve (12) acres of mule-fat and willow scrub habitats, that will be restored through the removal of weeds, planting of native trees and shrubs. Perennial water flows in the upper reaches of this creek range from 1 cubic foot in the summer months to over 30 cubic feet in winter floods. Water is mostly urban and agricultural runoff of limited quality, although water quality will be tested once conservation easements are established. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources include the 2.5 acres of riparian restoration and 9.5 enhancement with the entire 12 acres being preserved and managed under a series of conservation easements that will be established through the program (§332.8(c)(2)(v)).



Proposed Goldenstar Conservation Easement Area





**Location:** Olsen Canyon, Riverside Co., CA. in the Cajalco Hydro Subarea, Lake Mathews Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approx. 8 acres of riparian/ephemeral habitat preservation and 7 acres of enhancement and 1 acre of ephemeral restoration.

**Condition:** Fair to Good (photo documented/aerials)

**Threats:** Streamside impacts from off-road use, non-native weeds and recurrent fire.

**Goals:** Establishment of conservation easements, enhancement, restoration and preservation of native habitat, prevention of off-road use.

**Threats** to this site occur from degradation of the stream channel from off-road use as an access way, displacement of native vegetation due to off-road use, removal of native vegetation for off-road access and recurrent fire from intentional acts (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation by human activity, intentional removal of plants and fire, have all reduced the historic size of this canyon (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are fair to good. The site consists of acres of sycamore woodland, with mule-fat and willow scrub habitats, ephemeral sycamore woodland that will be enhanced through the removal of roads, planting of native trees and shrubs. Ephemeral water flows originate from rainfall. Flows range from less than .50 ccf in the winter, to only subsurface flow in the summer months. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources include the 1 acre of ephemeral restoration and 7 acres of enhancement and the entire 10 acres being preserved and managed under a conservation easement that will be established through the program (§332.8(c)(2)(v)).

Proposed Olsen Canyon Conservation Easement Area







**Location:** **Springbrook Wash**, Riverside Co., CA. in the Riverside Hydro Subarea, Middle Santa Ana Hydro Subunit (§332.8(c)(2)(i)).

**Acreage:** Approx. 25 acres of riparian and ephemeral habitat preservation, 5 acres of restoration and 20 acres of enhancement.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Streamside impacts from off-road use, non-native weeds, dumping and development

**Goals:** Establishment of conservation easements on 25 acres, enhancement, restoration and preservation of native habitat, prevention of dumping, reduction in sedimentation through strategic planting

**Threats** to this site occur from degradation of the stream channel from sedimentation, displacement of native vegetation from off-road use, removal or native vegetation for flood control (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation by human activity, intentional removal of plants, dumping and other activities have degraded the wash even though hydraulic conditions exist for native plant establishment. All 25 acres have been impacted in one way or another (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are poor to fair. The site consists of mule-fat and willow scrub habitats in areas that have surface water flows into summer, and ephemeral areas of alluvial scrub that need restoration through the control of non-native plants, planting of native trees and shrubs. Ephemeral water flows come from the north side of Box Springs Mountain and surface springs when rainfall is adequate. (also see page 33) (§332.8(c)(2)(v)).

**Preservation objectives**, amounts, types and locations of aquatic resources include 5 acres of restoration with the site being preserved and managed under conservation easements that will be established through the program (§332.8(c)(2)(v)).



Proposed Springbrook Wash Conservation Easement





**Location:** **McBride Canyon**, Riverside Co., CA. in the Bedford Hydro Subarea, Lake Mathews Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approx. 19 acres of riparian and ephemeral habitat preservation with 10 acres of enhancement.

**Condition:** Fair to Good (photo documented/aerials)

**Threats:** Streamside impacts from non-native trees, development and past uses.

**Goals:** Establishment of a conservation easement, enhancement and preservation of native habitat through planting on 19 acres.

**Threats** to this site occur from degradation of the stream channel from non-native eucalyptus trees, removal of native vegetation for flood control (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation by human activity, non-native trees and other human activities that have degraded the canyon over the years along with confinement of the wash even though hydraulic conditions exist for native plant establishment. About 3 acres remain impacted in one way or another (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are fair to good. The site consists of mule-fat and willow scrub habitats, ephemeral areas of sycamore woodland that need enhancement through the control of non-native plants, planting of native trees and shrubs. Ephemeral water flows from winter rainfall range from 5 ccf to over 20 ccf during flood events. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources include 10 acres of enhancement and the entire site being preserved and managed under a conservation easement that will be established through the program (§332.8(c)(2)(v)).



Proposed McBride Canyon Conservation Easement Area





side Co., CA. in the Bedford Hydro Subarea, Lake Mathews Hydro Subunit (§332.8(c)(2)(i))

Acreage: Approx. 2 acres of riparian and open water habitat preservation and 2 acres of enhancement.

Condition: Fair to Good (photo documented/aerials)

Threats: Streamside impacts from non-native trees and development.

Goals: Establishment of a conservation easement, enhancement and preservation of native habitat through planting and management.

**Threats** to this site occur from degradation of the stream channel from non-native eucalyptus trees, removal of native vegetation for flood control and off-stream hydrology reduction (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from human activity, non-native trees and reduction in stream hydrology. About .50 have been lost in the area but will be restored through the program (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are fair to good. The site consists of mule-fat and willow scrub habitats of 1 acre and .50 acres of open water. Approximately .50 acres of mule-fat and willow need enhancement through the control of non-native plants, planting of native trees and shrubs. Perennial water occurs due to spring-fed conditions. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources include 2 acres of enhancement and the entire site being preserved and managed under a conservation easement that will be established through the program (§332.8(c)(2)(v)).



Proposed McBride Flood Control Pond Conservation Easement Area.





**Location:** Reche Canyon, Riverside Co., CA. in the Riverside Hydro Subarea, Middle Santa Ana Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approx. 7 acres of riparian and ephemeral habitat preservation and 6 acres of enhancement and 1 acre of restoration.

**Condition:** Fair to Good (photo documented/aerials)

**Threats:** Streamside impacts from development, sedimentation and landowner intrusions.

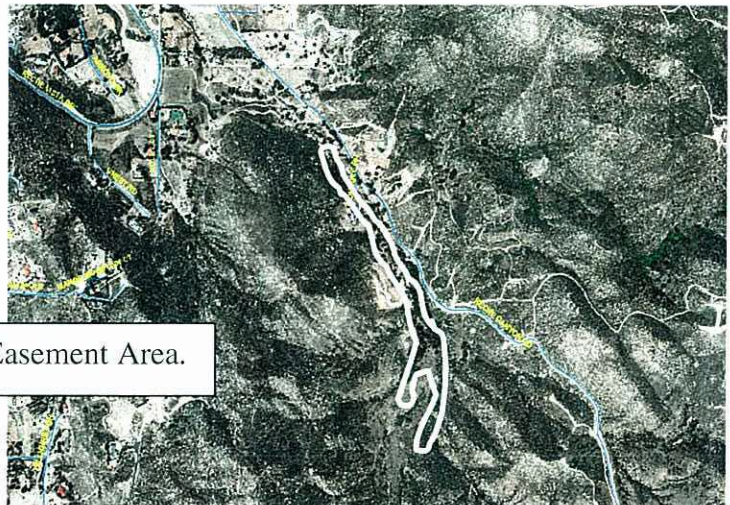
**Goals:** Establishment of conservation easements, enhancement and preservation of native habitat through planting, sediment control and landowner education.

**Threats** to this site occur from degradation of the stream channel from landowner impacts from sediment control activities, removal of native vegetation for flood control purposes and stream hydrology reduction (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from human activity, reduction in stream hydrology due to flood control activities and about 1.50 have been lost in the area due to these activities (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are poor to fair. The site consists of mule-fat and willow scrub habitats that can be restored through the control of non-native plants, planting of native trees and shrubs and control of landowner activities in the waterway. Ephemeral water flows originate from rainfall on the north side of Blue Mountain. In addition, other flows originate from subsurface water in the upper reaches of the canyon. Winter flows range in volume from 5 ccf to over 20 ccf during flood events. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources include 6 acres of enhancement and one acre of restoration with the entire site being preserved and managed under a conservation easement that will be established through the program in cooperation with the landowners (§332.8(c)(2)(v)).



Proposed Reche Canyon Conservation Easement Area.





**Location:** **Brown Canyon**, Riverside Co., CA. in the Coldwater Hydro Subarea, Lake Mathews Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approximately 10 acres of riparian and oak woodland habitat preservation with 5 acres of enhancement, 5 acres of restoration.

**Condition:** Fair to Good (photo documented/aerials)

**Threats:** Streamside impacts from development, and flood facilities.

**Goals:** Establishment of conservation easements, enhancement and preservation of native habitat through planting and homeowner education.

**Threats** to this site occur from nearby development for nearby landowner intrusions of non-native plants, building of paintball courses and flood control activities (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from human activity due to flood control activities. About an acre of habitat have been lost in the area due to these activities (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are fair to good. The site consists of mule-fat and willow scrub habitats, oak woodlands and upland Riversidean sage scrub. Ephemeral water flows in the amount of 1 ccf come from rainfall events, but may increase to over 20 ccf during flood events. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of resources include 5 acres of restoration, 5 acres of restoration and the entire site being preserved and managed under a conservation easement that will be established through the program. Planting of native trees and shrubs will be done and the total acreage will be managed until success criteria are met (§332.8(c)(2)(v)).



Proposed Brown Canyon Conservation Easement Area.





**Location:** **Cajalco Creek**, Riverside Co., CA. in the Cajalco Hydro Subarea, Lake Mathews Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approximately 40 acres of riparian and mule fat scrub habitat preservation with 12 acres of restoration, 28 acres of enhancement.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Streamside impacts from development, landowner intrusions, off-road use and illegal dumping

**Goals:** Establishment of conservation easements, restoration and preservation of native habitats through planting and irrigation

**Threats** to this site occur from nearby development, non-native plants, building of house pads, dumping and off-road courses (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from human activity due to fill, off-road damage, dumping and grading. About 3.50 acres of habitat have been lost in the area due to these activities. (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are poor to fair. The site consists of mule-fat and willow scrub habitats, mixed grasslands and mule-fat stinging nettle scrub. Perennial and ephemeral water flows come from rain and urban nuisance water. Upper reaches of the creek have perennial flows due to urban and agricultural runoff of limited quality. Water testing is conducted in areas where RCRCDC holds a conservation easement. Some listed species already occur in this watershed. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources include 12 acres of restoration, 28 acres of enhancement and parcels being preserved and managed under a conservation easement that will be established through the program. Planting of native trees and shrubs will be done and the total acreage will be managed until success criteria are met (§332.8(c)(2)(v)).

Proposed Upper Cajalco Creek Conservation Easement Area.







**Location:** Mockingbird Creek, Riverside Co., CA. in the Arlington Hydro Subarea, Middle Santa Ana Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approximately 50 acres of riparian and mule fat scrub habitat preservation with 5 acres of restoration and 45 acres of enhancement.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Streamside impacts from development, landowner intrusions and off-road use

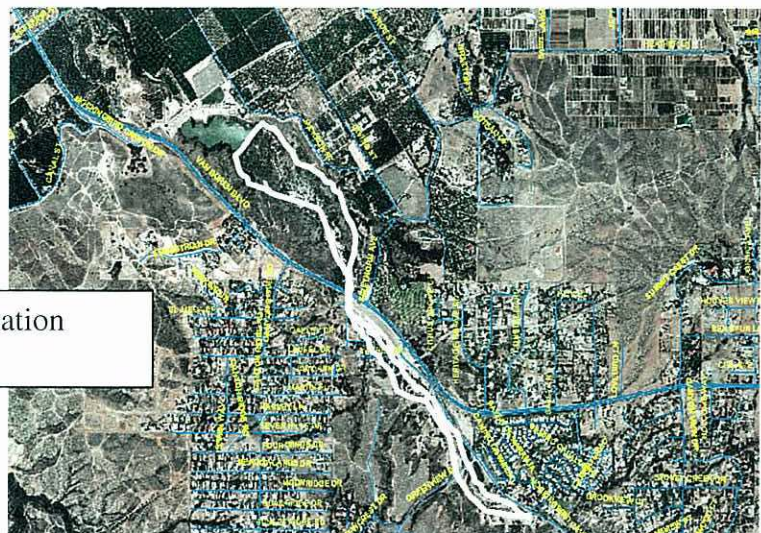
**Goals:** Establishment of conservation easements, restoration and preservation of native habitat through planting, irrigation, homeowner education and prevention of fill

**Threats** to this site occur from homeowner intrusions, weeds that displace native habitat, building of house pads, dumping and fill used to stabilize stream banks (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from human activity (fill, off-road damage, dumping and grading). About 3 acres of habitat have been lost in the area due to these activities, mainly willow and Mule-fat scrub habitat (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are poor to fair. The site consists of approximately 20 acres of mule-fat and willow scrub habitats, and 30 acres of mixed mule-fat and stinging nettle scrub with open ground between habitat clumps. Approximately 5 acres need restoration work. Perennial water flows originate due to agricultural and urban runoff. Flows range from .50 ccf to over 30 ccf during storm events. Some areas of the creek have surface water while others have subsurface flows due to sandy substrates that do not allow surface flows due to their depth. Some listed species already occur in this watershed. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources include 5 acres of restoration and parcels being preserved and managed under a conservation easement that will be established through the program. Planting of native trees and shrubs will be done and the total acreage will be managed until success criteria are met (§332.8(c)(2)(v)).



Proposed Mockingbird Canyon Conservation Easement Area.





**Location:** **Box Springs Creek**, Riverside Co., CA. in the Riverside Hydro Subarea, Middle Santa Ana Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approximately 5 acres of riparian and mule fat scrub habitat preservation with 2 acres of restoration and 3 of enhancement.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Streamside impacts from development Invasive weeds

**Goals:** Establishment of conservation easements, Enhancement and preservation of native habitat through planting, removal of weeds and fencing

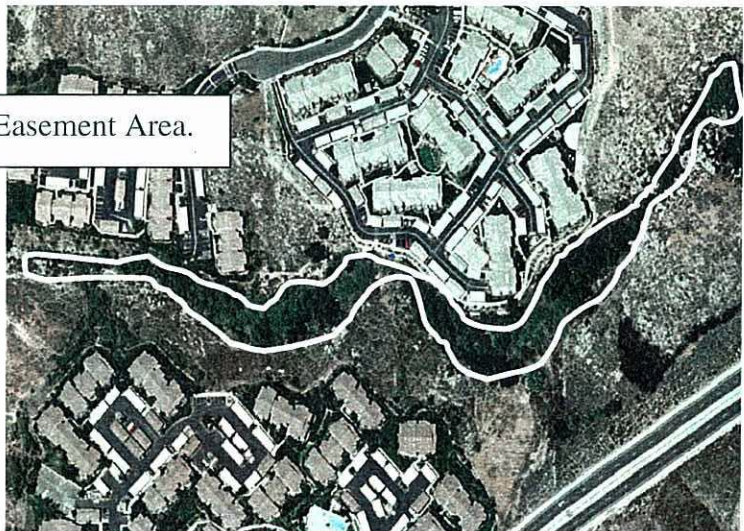
**Threats** to this site occur from nearby development, weeds that displace native habitat, building of drainage structures and fill used to stabilize stream banks (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from human activity with about 1 acres of habitat have been lost in the area due to these activities (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are poor to fair. The site consists of approximately 5 acres of mule-fat and willow scrub habitats with some fair willow scrub between patches of non-native weeds (arundo, castor bean and tree tobacco). Approximately 2 acres need restoration. Perennial water flows originate due to urban runoff and some natural springs. Flows can range from 1 ccf during the summer to over 10 ccf during storm events. (see also page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources include 2 acres of restoration and the entire site being preserved and managed under a conservation easement that will be established through the program. Planting of native trees and shrubs will be done and the total acreage will be managed until success criteria are met (§332.8(c)(2)(v)).

Proposed Box Springs Creek Conservation Easement Area.







Bernardino Co., CA. in the Riverside Hydro Subarea, Middle Santa Ana Hydro Subunit (§332.8(c)(2)(i))

Acreage: Approximately 6 acres of riparian and wetland habitat preservation with 1 acres of wetland creation and 1 acre riparian restoration and 4 acres of enhancement.

Condition: Poor to Fair (photo documented/aerials)

Threats: Streamside impacts from development, urban runoff, weeds, some trash.

Goals: Establishment of conservation easement, creation and preservation of native habitat through planting and fencing of area.

**Threats** to this site occur from nearby development, weed trees that displace native habitat, building of drainage structures and fill used to stabilize stream banks and altered hydrology. (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from human activity with about .50 acres of habitat being lost due to invasive trees, damage from agriculture activities and no protection. (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are poor to fair. The site consists of weed trees caused by drought conditions that resulted from altered channel hydrology. Ephemeral water flows originate from urban runoff with high flows during storm events due to direct street runoff from storm drains. Flows range from a few cubic feet to a maximum of 20 ccf due to the size of the drainage system. (also see page 33) (§332.8(c)(2)(iv)).

**Preservation objectives,** amounts, types and locations of aquatic resources include 1 acres of wetland creation and one acre of riparian creation with the entire 6 acres being preserved and managed under a conservation easement that will be established through the program. Planting of native trees and shrubs will be done and the total acreage will be managed until success criteria are met (§332.8(c)(2)(v)).







**Location:** Main Street Canyon, Riverside Co., CA. in the Riverside Hydro Subarea, Middle Santa Ana Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approximately .55 acres of ephemeral habitat restoration and 27 acres of protection.

**Condition:** Poor to Fair (photo documented/aerials)

**Threats:** Streamside impacts from development, urban runoff, weeds, some trash.

**Goals:** Establishment of conservation easement, creation and preservation of native habitat through planting and fencing of area.

**Threats** to this site occur from new development, drought caused by diversion of water flows, weeds that displace native habitat and building of drainage structures to divert water. (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from human activity with about .50 acres of habitat being lost due to agriculture activities. (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are poor to fair. The site consists of mule-fat and willow scrub and alluvial scrub. However, most of the area suffers from drought conditions that resulted from altered channel hydrology. Approximately .55 acres of ephemeral habitat are possible. Ephemeral water flows originate from rain events in the Santa Ana Mountains. Flows can range from 5 ccf to over 500 ccf during heavy rain events. (also see page 33) (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources include 27 acres of preservation and .55 acres of restoration, all being managed under a conservation easement. Planting of native trees and shrubs will be done and the total acreage will be managed until success criteria are met (§332.8(c)(2)(v)).



Main Street Canyon





**Location:** **Sycamore Canyon**, Riverside Co., CA. in in the Coldwater Hydro Subarea, Lake Mathews Hydro Subunit (§332.8(c)(2)(i))

**Acreage:** Approximately 2.5 acres of ephemeral alluvial sage scrub habitat restoration and 2 acres of oak woodland restoration and 4.5 acres of preservation.

**Condition:** Fair (photo documented/aerials)

**Threats:** Impacts from development and weeds and altered hydrology.

**Goals:** Establishment of a conservation easement, preservation of native habitat, planting and monitoring.

**Threats** to this site occur from new development, drought and flood hydrology caused by fire and diversion of water flows through and around agriculture, weeds that displace native habitat and building of drainage structures to control water flows. (§332.8(c)(2)(ii)).

**Historic aquatic losses** at this location include displacement of native vegetation from human activity, agriculture activities and flood control structures. (§332.8(c)(2)(iii)).

**Current aquatic resources** and their condition are fair. The site consists of mule-fat and alluvial sage scrub, oak woodland and non-native grassland vegetation. However, most of the area suffers from drought conditions that resulted from altered channel hydrology. Ephemeral water flows originate from rain events in the Santa Ana Mountains. Flows can range from 0 ccf in the summer to over 100 ccf during heavy rain events. (§332.8(c)(2)(iv)).

**Preservation objectives**, amounts, types and locations of aquatic resources include the 2.5 acres of restoration, 2 acres of oak woodland restoration and 4.5 of preservation. Planting of native trees, shrubs and grasses will be done and the area would be monitored until success criteria are met under an HMMP. (§332.8(c)(2)(v)).

Sycamore Canyon





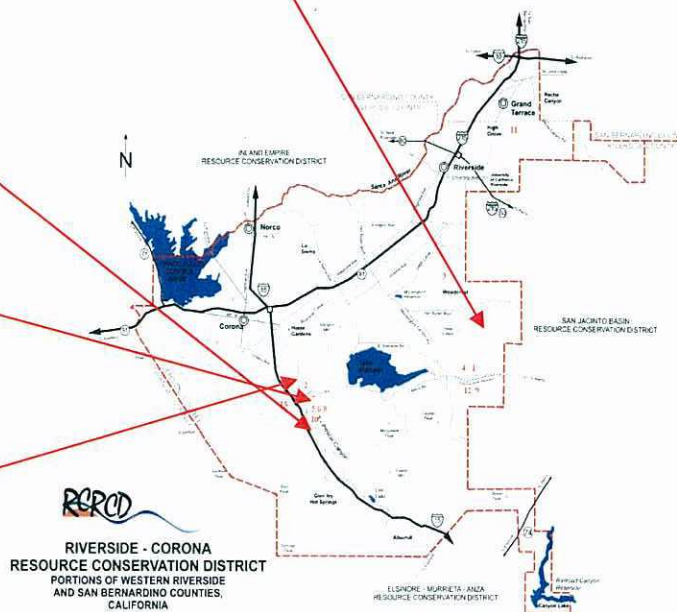
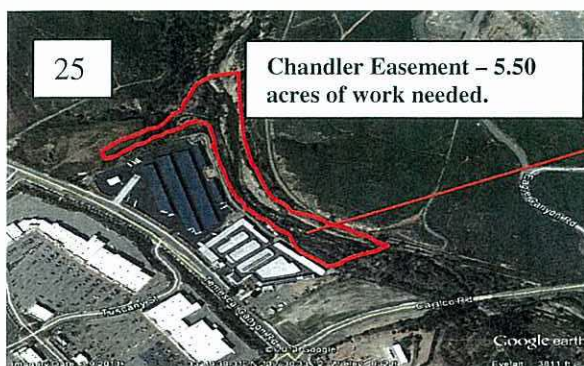
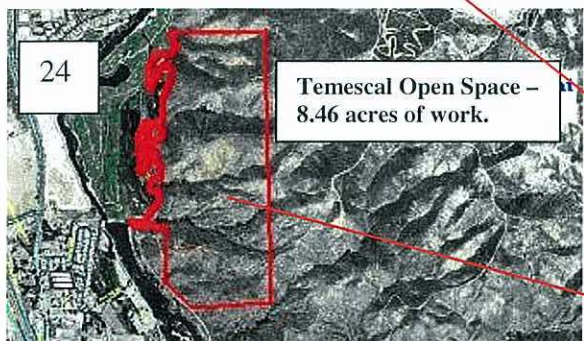
## RCRCD Currently Established Conservation Easements Proposed for use in the Program

**22. Tagorda Conservation Easement** - This established .34 acre easement falls within the Mockingbird watershed and requires .34 acres of restoration in the Cajalco Hydro Subarea, Lake Mathews Hydro Subunit.

**23. Lee Lake Conservation Easement** – This area falls within the Temescal Hydro Subarea and the Middle Santa Ana Hydro Subunit, Santa Ana Watershed and has 8.03 acres of enhancement and 0.95 acres of restoration.

**24. Temescal Open Space** – This area occurs in the Cajalco Hydro Subarea and the Lake Mathews Hydro Subunit, Santa Ana Watershed and has 1.60 acres of restoration, 1.50 acres of enhancement and 5.4 acres of buffer.

**25. Chandler Easement** – The easement consists of 2.76 acres of preservation, 2.20 acres of enhancement and 0.54 acres of restoration, falling within a 7.75 acre area.





### **Prioritization Strategy (§332.8(c)(2)(vi)).**

While all the proposed areas have significant natural values, some of the areas currently provide good habitat for sensitive and listed species, while other areas will provide that habitat once restored or created. Most of these areas are not currently slated for development, but nearby land uses impact their ability to function properly. Sites that have the highest potential for negative impacts will be preserved first. The prioritization strategy for the In-Lieu fee program will be to identify project sites within the proposed areas (pp. 15-37) described in this Prospectus that have the highest habitat value for conservation and active management. The goal will be to acquire either fee title or conservation easements in these areas, and to place into conservation and restore these riparian and ephemeral habitats. Specifically, the District will:

- 1. *Restore aquatic resources on existing District conservation easement lands*** as well as in areas that contain sensitive, rare or listed plants, animals or habitat that have been impacted by development or negative human activity and which require immediate conservation to reduce or eliminate removal or loss. The initial priority will be restoration of aquatic resources on lands already held in conservation by the District, namely, the Tagorada, Lee Lake, Temescal Open Space and Chandler conservation easements. The second priority will be to identify adjacent or neighboring areas in need of immediate conservation, and to acquire and preserve such lands.
- 2. *Purchase conservation easements or fee title*** on lands that have trash, weeds, off-roading or other activities which negatively impact or degrade aquatic and related habitat, and which are not currently protected. The targeted geographic conservation areas are identified elsewhere in this document.
- 3. *Creation, restoration, enhancement and long-term management*** of habitat lands will be conducted once new conservation easements have been recorded. In this phase, focus will be placed upon habitats that are not currently under imminent threat from human activity, that have invasive weeds and/or that have other conserved lands near or adjacent to the proposed restoration site.

Since many of these areas are not currently under conservation or within conservation easements that the RCRCDC manages, acquiring conservation easements within these areas needs to be a priority. The RCRCDC will use the USGS “Aquatic Species and Habitat Assessment Protocol for Southwest Ecoregion Rivers, Streams and Creeks” for both amphibians and fishes to determine the quality and quantity of species present. Assessment protocol for native fishes will be used from the California Department of Fish and Game to assess native fish populations and conditions.

### **Explanation of How Preservation Objectives Identified and Addressed in the Prioritization Strategy Satisfy the Criteria for Use of Preservation in § 332.3(h) (§332.8(c)(2)(vii)).**

Preservation will be only one type of the compensatory mitigation credits that the Program seeks to serve (with other credit activities being enhancement, restoration, creation and passive regeneration as described in Section 10 herein). The main component of the preservation strategy will be to preserve, create, restore and/or enhance aquatic resources using a conservation easement or deed restriction in combination with long-term maintenance of the preserved land in perpetuity. The District will set aside endowment funds sufficient to cover the long-term maintenance requirements.

Section 332.8(c)(2)(vii) requests applicants to address the preservation criteria enumerated in Section 332.3(h). Accordingly, the District provides the following information:



i. The resources to be preserved provide important physical, chemical or biological functions for the watershed.

All of the areas proposed for protection, or already protected via conservation easement, by the District have biological functions considered essential for the continued health of the subject watersheds. The prioritization strategy will allow the District to focus first on enhancement, establishment and restoration of resources on lands already preserved by the District. These resources include mule-fat and willow scrub habitats, mixed grasslands, mule-fat/stinging nettle scrub that are native resources for many of the hydro subareas and subunits of the Santa Ana Watershed. In addition, wetland and riparian resources will be protected that support western pond turtle, coast range newt, arroyo chub, California tree frog, burrowing owl and other listed and sensitive species. Currently, the bulk of the aquatic reaches within the proposed conservation areas do not have adequate aquatic values (chemical or biological) due to degraded stream substrates, dumping, diversions, fill and other activities, all of which have decreased the function of the waterways. Providing creation, enhancement, restoration and protection of these areas will greatly increase both the function and value of the aquatic resources. If these resources are not preserved, increased degradation will continue to occur and increase non-point source pollution, erosion and sedimentation.

ii. The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability of the watershed, the district engineer must use appropriate quantitative assessment tools, where available.

The preservation objectives implemented through the prioritization strategy above will contribute significantly to the ecological sustainability of the watersheds. The District will use a wetland function assessment methodology, such as the California Rapid Assessment Method (CRAM) or other similar assessment program, in each of the District's proposed conservation areas to determine habitat quality and quantity, and the areas that would require enhancement, restoration or creation. A Habitat Monitoring and Mitigation Plan (HMMP) will also be developed to follow the recommendations of the assessment. However, it is likely that even when such a methodology is used, there may be instances where unforeseen circumstances occur and adaptive management of these sites is necessary. In these instances, best management practices for the site will be used based upon site assessment at the time of the problem. It should be noted that acreages should be used to determine compensatory mitigation requirements in place of linear stream feet where appropriate, or where adequate stream conditions exist to help assess aquatic resource functions.

iii. Preservation is determined by the district engineer to be appropriate and practicable.

While the district engineer must make the final determination, District staff has initially determined that the preservation of these geographic conservation areas outlined in this Prospectus is appropriate and practical for the watershed. This initial determination seems consistent with resource agency objectives in the area insofar as agency permits and other requirements continue to focus on the Temescal Wash and other aquatic areas that are identified by the District in the Program. Habitat areas that are severely fragmented, will be developed or have incompatible overlying restrictions will not be considered for inclusion in the program.

iv. The resources are under threat of destruction or adverse modifications.

The resources that will be considered for the Program are under threat of adverse modification and/or destruction from outside impacts. The extent and type of threats vary from property to property, and can be discussed in more detail as specific lands are proposed for acquisition. Many of the proposed areas have sensitive or rare habitat such as Coldwater salmonid/montaine habitat, upper Temescal Canyon



Western pond turtle habitat and Cajalco Creek burrowing owl habitat. Many of these areas are under threat of removal, degradation or extirpation of species. (see analysis on pages 33 & 34).

v. *The preserved sites will be permanently protected through an appropriate real estate or other legal instrument (e.g., conservation easement, title transfer to state resource agency or land trust).*

The District will permanently protect project sites through appropriate real estate or other legal instruments, such as conservation easement agreements and deed restrictions on all parcels acquired. In addition, the District will establish accounts (through one or more endowments established through payment of mitigation credits) to pay for long-term maintenance of all preserved lands in perpetuity. Preservation will normally be completed in advance or in conjunction with aquatic resources restoration, enhancement and establishment activities as described above. Focus will also be placed on the creation of buffers in upland and riparian areas to enhance the physical and biological characteristics of the protected aquatic resources.

**Public and Private Stakeholder Involvement (§332.8(c)(2)(viii)).** The District has existing MOU's aimed at watershed protection and related objectives with the Santa Ana Watershed Association, local water districts and the Riverside Land Conservancy. The District is in the process of developing MOU's with the Riverside County Flood Control and Water Conservation District, San Bernardino County Flood Control District, Riverside County Regional Park and Open Space District and the Riverside County Habitat Conservation Agency. In 2010, the District signed an MOU with the Western Riverside County Regional Conservation Authority (RCA) to help coordinate mitigation efforts on lands RCA owns. The District is also party to many cooperative agreements with private landowners related to implementation of District habitat enhancement activities on private lands. Depending on the needs of the project in question, the District would plan to involve these private and public entities, as appropriate. Presently, there are no District projects involving Native American tribes.

**Long-term Management Strategies (§332.8 (c)(2)(ix)).** Project sites will be managed on a long-term basis through the recordation of a conservation easement or a deed restriction on the project site in favor of the District. Long-term maintenance of the project site will be funded by an endowment established at the time of the recordation of the conservation easement or deed restriction and funded by sales of credits to permittees.

**Periodic Progress Evaluations (§332.8 (c)(2)(x)).** The District will draft an annual report that (1) briefly evaluates the current state of each project site and (2) reports on the progress of the program in achieving the goals and objectives set forth for each geographic services area encompassing those project sites. The annual report may contain photographs, as appropriate. Where practicable, adaptive management will be used in the event potential problems are identified. Reports will be provided to the U.S. Army Corps of Engineers and any other regulatory agency, upon request.

**Additional Information (§332.8 (c)(2)(xi)).** Information necessary for effective planning on existing conservation easements, such as title reports for lands already under RCRCDD control, title reports, parcel maps and recorded conservation easements for the Tagorada, Lee Lake and Temescal Open Space easements, can be found in appendices B, C and D.