

SECTION 2.0

PROJECT DESCRIPTION

The City of Pasadena is located approximately 10 miles northeast of the City of Los Angeles in the County of Los Angeles (Figure 2.1-1, *Regional Map*). The proposed *Arroyo Seco Master Plan* (proposed project) area is located in the west San Gabriel Valley. The approximately 1,000-acre proposed project area lies within the City of Pasadena and is partially bounded on the north by the Angeles National Forest; on the northeast, by the community of Altadena in the unincorporated area of the County of Los Angeles; on the south by the City of South Pasadena; and to the southwest by the Highland Park community of the City of Los Angeles. To the west, beyond the western boundary of the City of Pasadena, is the community of Eagle Rock in the City of Los Angeles. To the northwest, also at the western boundary of the City of Pasadena, are the two cities of Glendale and La Cañada-Flintridge.

The proposed project area includes three sub-areas known as Hahamongna Watershed Park [approximately 300 acres, part of the Upper Arroyo Seco], the Central Arroyo Seco [approximately 550 acres], and the Lower Arroyo Seco [approximately 150 acres]. The Upper Arroyo Seco includes the approximately 300-acre *Hahamongna Watershed Park Master Plan* area plus an additional 1,000 acres north of the Jet Propulsion Laboratory (JPL) bridge. These three sub-areas are shown in Figure 2.1-2, *Topographic Map*. There are four primary routes of travel in the vicinity of the Arroyo Seco. State Route 2 (Angeles Crest Highway) runs northeast/southwest, and crosses the northern portion of the Upper Arroyo; U.S. Interstate 210 (Foothill Freeway) generally runs east/west, crosses the Arroyo Seco north of the Central Arroyo Seco, and divides the Central Arroyo Seco and Hahamongna Watershed Park; State Highway 134 (Ventura Freeway) runs east/west and crosses the Arroyo Seco between the Central Arroyo Seco and the Lower Arroyo Seco; and State Route 110 (Pasadena Freeway) runs north/south along the south end of the Lower Arroyo Seco. The proposed project area is bounded on the north by the San Gabriel Mountains and to the west by the San Rafael Hills. The Arroyo Seco passes through the length of the proposed project area, and continues to its confluence with the Los Angeles River near the downtown area of the City of Los Angeles. The Master Plan location (Figure 2.1-3, *Vicinity Map*) appears on the USGS 7.5 minute series Pasadena (Township 2 North, Range 12 West, Section 31 and

Township 1 North, Range 12 West, Section 5 and portions of the San Pascual land grant boundary) and Los Angeles topographic quadrangles (Township 1 North, Range 12 West, within the San Pascual land grant boundary).

The Upper Arroyo Seco, which includes Hahamongna Watershed Park, is approximately a 4-mile stretch, and is bounded on the north by the Angeles National Forest and to the east by the community of Altadena in the unincorporated area of the County of Los Angeles. It is bounded on the south by the Foothill Freeway and Devil's Gate Dam and to the west by the City of La Cañada-Flintridge. The analysis of the Upper Arroyo Seco is limited to the 300-acre Hahamongna Watershed Park, located at 4550 Oak Grove Drive.

The Central Arroyo Seco, which includes the Rose Bowl facilities, is an approximately 2.5-mile stretch, and is bounded on the north by the Foothill Freeway and Devil's Gate Dam, and to the east by the City of Pasadena. It is bounded to the south by the Ventura Freeway and the Holly Street Bridge and to the west by the City of Pasadena. The Rose Bowl, which is a key feature of the Central Arroyo Seco, is located at 1001 Rose Bowl Drive. The Central Arroyo is near the City's western boundary, shared with the City of Los Angeles community of Eagle Rock and the City of Glendale.

The Lower Arroyo Seco, approximately 1.75-mile in length, is bounded on the north by the Ventura Freeway and the Holly Street Bridge, to the east by the City of Pasadena, to the south by the City of South Pasadena, and to the west by the City of Pasadena. La Casita del Arroyo Clubhouse, a feature of the Lower Arroyo Seco, is located at 177 South Arroyo Boulevard. The Lower Arroyo is near the City of Pasadena's western boundary with the City of Los Angeles communities of Eagle Rock and Highland Park, and the City of South Pasadena.

2.1 STATEMENT OF OBJECTIVES

The goal of the proposed Project is to provide facilities for passive and active recreation that support Policy 9.2 of the City of Pasadena's *Comprehensive General Plan* to provide recreation facilities and programs to meet the diverse needs of City of Pasadena residents and visitors. The proposed project consists of five elements: (1)

Hahamongna Watershed Park Master Plan (HWP), (2) Central Arroyo Seco Master Plan (CAMP), (3) Lower Arroyo Seco Master Plan (LAMP), (4) Rose Bowl Operating Company (RBOC) Use Plan, and (5) Design Guidelines.

The following objectives have been identified to support the Master Plan goals:

- ?? Implement Proposition A funding for Hahamongna Watershed Park;
- ?? Implement Proposition A funding for projects in the Lower Arroyo Seco;
- ?? Achieve restoration/conservation of the natural environment;
- ?? Conserve a living cultural history of the region compatible with designated recreation uses;
- ?? Development and rehabilitation of Hahamongna Watershed Park consistent with the County of Los Angeles Department of Public Works flood control easement;
- ?? Operate and maintain flood control facilities to provide protection to downstream structures, neighborhoods, and communities from a capital storm event;
- ?? Optimize water conservation in the Arroyo Seco to serve City of Pasadena enterprises and residents;
- ?? Continue to operate the Rose Bowl as a premiere sporting event venue;
- ?? Develop a traffic management plan for the Central Arroyo Seco that incorporates a Rose Bowl shuttle route, including safety measures for recreational users;

- ?? Provide recreation facilities and programs to meet existing and 2020 planning horizon projected levels of demand;
- ?? Update the Arroyo Seco Public Lands Ordinance;
- ?? Provide a multimodal trail connection to the Rim of the Valley Trail and maintain connection to the Pacific Crest Trail and the County of Los Angeles Riding and Hiking Trails;
- ?? Enhance the existing internal system of trails to serve passive and active recreation uses within the Arroyo Seco;
- ?? Implement recreation improvements consistent with the County of Los Angeles Sheriff's Department Crime Prevention through Environmental Design Guidelines;
- ?? Provide for new revenue-generating park facilities;
- ?? Develop a maintenance plan for existing park facilities; and
- ?? Provide *Americans with Disabilities Act (ADA)* access for most of the facilities.

Components for each of the five *Master Plan* elements have been identified through the Master Planning process. Components of the proposed project were considered in light of existing adjacent land uses constraints and opportunities that are inherent to the Arroyo Seco. Adjacent land uses include public green space (Angeles National Park), residential, transportation and circulation, emergency services (Component 2 and City of Pasadena Active and Passive) recreation and institutional (La Cañada High School and Jet Propulsion Laboratory). The City of Los Angeles Department of Public Works has an easement for flood control and water conservation within the Arroyo

Seco. Similarly, the City of Pasadena maintains a series of spreading basins for water conservation, within the Upper Arroyo, that are essential to the City's water supply. Some of the jurisdictions adjacent to the Arroyo Seco are the County of Los Angeles (unincorporated) to the east, the City of South Pasadena to the south, the City of Glendale to the west and the City of La Cañada-Flintridge to the west.

2.2 EXISTING FACILITIES

2.2.1 Upper Arroyo Seco (including Hahamongna Watershed Park)

The Upper Arroyo Seco provides a transition from the urban land uses associated with the community of Altadena and the cities of Pasadena and La Cañada-Flintridge to the multiple-use open space areas of the Angeles National Forest. This element of the proposed project would guide improvements to the southernmost 300 acres of the Upper Arroyo Seco, operated as Hahamongna Watershed Park.

The utility infrastructure that exists within the Upper Arroyo Seco includes storm drains, water mains, water wells, overhead power and communication lines, natural gas lines, and sewer management systems.

The lower eastern portion of the *HWP* area is comprised of a sediment plain located upstream of the Devil's Gate Dam. It also contains Johnson Field, which is used for informal softball games, group picnics, and related activities. The western portion of the *HWP* area contains Hahamongna Watershed Park (formerly Oak Grove Park). Hahamongna Watershed Park is divided into two areas, the Upper Oak Grove, and the Lower Oak Grove, so named due to the site's topography. The Upper Oak Grove facilities include picnic facilities, restrooms, a maintenance building, and the equestrian staging area. The Lower Oak Grove facilities include a group picnicking area, a multipurpose play field, restrooms, and an 18-hole disc golf course. Major landowners adjacent to Hahamongna Watershed Park include Metropolitan Water District (MWD), the JPL, and single family residences. There are a number of recreation facilities within the proposed project area that are operated for the City pursuant to lease agreements. This area is currently dominated by passive recreation uses, water conservation, and flood control activities.

The vegetation of the *HWP* area is dominated by a mixture of California terrestrial natural plant communities or vegetation series that have been subject to varying levels of disturbance from sand and gravel mining, water conservation, flood control, and recreation activities. Throughout the majority of the *HWP* area drainage, riparian scrub habitats and weedy non-native grasslands dominate the floor of the central portion of the drainage. Oak woodland and other types of scrub habitats occupy variable areas along the perimeter and/or side walls of the drainage. Landscaped areas are populated with introduced, ornamental shrubs and trees and exotic, ruderal (associated with disturbed ground) weedy species of grasses and forbs.

The *HWP* area is zoned as Open Space, with the exception of one parcel zoned as a Planned Development District. The entire basin is designated as Open Space in the Land Use Element of the *City of Pasadena Comprehensive General Plan*¹.

2.2.2 Central Arroyo Seco

The 550-acre Central Arroyo Seco is the most intensely developed portion of the proposed project area. The Central Arroyo Seco contains the Rose Bowl (capacity approximately 91,000) and related Rose Bowl facilities, including parking; other neighboring facilities in the Central Arroyo Seco include the Aquatic Center, Jackie Robinson baseball field, Fannie Morrison Horticultural Center, tennis courts, parking lots, Brookside Golf Course and Clubhouse, multi-use trails, equestrian loop, multipurpose fields, Rosemont Pavilion, an amphitheater, and Brookside Park and Area H. The canyon floor is dominated by development and landscaped features, and the canyon walls contain a mixture of native and introduced plant species. This area is primarily characterized by active recreation uses. The Rose Bowl and Aquatic Center are commercial recreation uses as defined by the City's zoning code.

¹ City of Pasadena, April 1994. *General Plan EIR, Land Use and Mobility Elements*. Contact: 100 N. Garfield Avenue, Pasadena, CA 91109. Prepared by: EIP Associates, Pasadena, CA.

2.2.3 Lower Arroyo Seco

The 150-acre Lower Arroyo Seco is designated as open space, and contains a natural park, fly casting pond and clubhouse, archery range and clubhouse, rubble walls, and multi-use trails. The canyon walls support primarily native and naturalized plant species, which serve as habitat for a variety of bird, insect, and small mammal species. The canyon floor has been artificially flattened by fill and grading, and is vegetated primarily with non-native grasses. A concrete flood control channel runs through the entire length of the Lower Arroyo Seco, dividing the canyon into east and west sides. Approximately 26 acres within the Lower Arroyo Seco were recently restored with naturalized streambeds and native vegetation and this area is currently characterized by active and passive recreation uses.

ARROYO SECO MASTER PLAN

HAHAMONGNA WATERSHED PARK

2.3 MASTER PLAN ELEMENTS

2.3.1 Hahamongna Watershed Park

The Hahamongna Watershed Park Master Plan element of the Arroyo Seco Master Plan is organized into twenty use areas (Figure 2.3.1-1, *Hahamongna Watershed Park master Plan*):

- Devil's Gate Dam Area
- Westside Park Access
- Eastside Park Access
- Water Conservation
- Flood Management
- Oak Grove Area
- Supervised Overnight Camping Area
- West Lake
- Equestrian Staging Area
- Sunrise Overlook
- West Arroyo Parking
- Eastside Park Area
- East Lake
- Sunset Overlook
- Gabrielino Trail Area
- Trail Development
- Bicycle Route
- Habitat Conservation
- Utilities
- Accessibility and Safety-Perimeter Park Fencing and Gates

2.3.1.1 Devil's Gate Dam Area

2.3.1.1.1 New Parking Areas

A new 6,000-square-foot parking lot would be constructed at the intersection of Linda Vista and Oak Grove Drive with an overlook to the Devil's Gate Dam spillway. Construction of the new parking lot would require 10,000 square feet of grading, with 160 cubic yards of grub to be exported. An existing tunnel under Oak Grove Drive would allow pedestrian access to the western end of the dam. The parking lot would accommodate approximately 12 vehicles and would be located on the upper terrace. Two thousand square feet of Americans with Disabilities Act (ADA)-accessible concrete walks and ramp(s) would take visitors from the parking lot to the lower observation area and access tunnel to the dam. An existing retaining wall along the observation area and landing to the tunnel would need to have the existing chain link fencing replaced with ornamental iron safety fencing, similar to that recommended for the dam's parapet walls. A gate would be installed on the southern opening of the tunnel to allow for securing access at night. Approximately 2,000 square feet of area adjacent to the new 6,000-square-foot parking area would be landscaped.

2.3.1.1.2 East Access (Entry) to Dam

A new 8,400-square-foot entry slip lane allowing direct access to the dam and basin from Oak Grove Drive, dam and basin access roads, and three parking spaces would be constructed to minimize maintenance equipment traffic for the flood management-water conservation pool and dam operation out of the adjacent residential neighborhood. The existing road bed at the eastern end of the Devil's Gate Dam area would be raised to accommodate the new slip lane, tapering off to meet the existing east side haul road, which would be uniformly graded and descend to the flood maintenance staging area. This access would allow maintenance vehicles to enter the area via a secured entry gate and to drive onto the one-way (westbound) dam or down into the debris/sediment basin. The entry gate would be configured to allow bicycles access to the dam from Oak Grove Drive.

2.3.1.1.3 West Access (Exit) from Dam

The one-way (westbound) flow of maintenance vehicle traffic across the dam requires an exit on the west end of the dam. This exit would be provided at the location

previously used as a temporary access road during construction projects on the dam. Vehicles exiting the dam at this location would be required to turn right. The one-way exit to Oak Grove Drive and eastside approach to the new Flint Wash Bridge Crossing together would require 6,200 square feet of paving.

2.3.1.1.4 Close La Cañada-Verdugo Road

The existing pipe gate at the end of the cul-de-sac on La Cañada-Verdugo Road would be removed and the curb restored, eliminating vehicle access from this residential street. Vehicular access to the eastside of the dam would be through the proposed Oak Grove Drive Entry and Exit (See Section 2.3.1.1.2 and 2.3.1.1.3, *West Access (Exit from Dam)*). A small landscaped berm would be created along the edge of the cul-de-sac to further buffer the adjacent residential neighborhood from park activities. As needed, storm drains and perimeter fencing would be modified.

2.3.1.1.5 Dam Keeper's Quarters and Public Restroom

The existing dam keeper's quarters located on the east side of the dam would be demolished and rebuilt as a public restroom to serve park visitors in the area of the dam and as they enter/exit the Central Arroyo area. The new 600-square-foot restroom would have one urinal and one stall for men, two stalls for women, and 100 square feet of storage. New dam keeper's quarters would be built above the public restroom with sleeping quarters, a small kitchenette, and a private restroom. This second story would afford the dam keeper a view of the basin during storm events. On the ground level, connected to the public restroom, would be a storage area (single-car garage) for materials and equipment related to the operation and maintenance of the dam. The former dam keeper's house (the current Arroyo Resource Center) would gravity-feed to a sewage lift station at this facility with a force main to the main sewer in La Cañada and Verdugo Road.

2.3.1.1.6 Public Safety at Dam and Observation Deck

The City of Pasadena (City) would work collaboratively with Los Angeles County Department of Public Works (LACDPW) to enhance safety at the deck on the dam, at the observation deck south of the westside tunnel overlooking the spillway, and along the trails (see Section 16.8 Dam Observation Trail) that leads down to an observation point

overlooking the dam and the water conservation pool (See Section 2.3.1.4.1, *Seasonal Flood Management Water Conservation Pool*). Safety could be enhanced through the installation of 1,225 linear feet of ornamental fencing along the dam parapet walls and the spillway observation deck. Fencing would be similar to that installed by the City on the Colorado Street Bridge.

2.3.1.2 Westside Park Access

2.3.1.2.1 Park Entrance at Foothill Boulevard

The main westside park entrance would remain at Oak Grove Drive and Foothill Boulevard. The entry would receive a new park entrance sign, landscaping, and entry area lighting. This entrance would be for egress, ingress, and unobstructed access to the Metropolitan Water District (MWD) lessees, including the U.S. Forest Service, Rose Bowl Riders, and Tom Sawyer Camp. As needed, the use of a traffic control facility/entry kiosk for security and dissemination of information would be assessed.

2.3.1.2.2 Oak Grove Drive Improvements

An access lane would make entry to the park safer and more efficient, as well as alleviate Oak Grove Drive peak-hour traffic due to La Cañada High School and JPL. A one-way access lane from Oak Grove Drive at the Berkshire intersection is proposed to allow park users to enter the park during peak hours. The access lane would be ingress only and would have a secure gate built into the perimeter fence with appropriate signage.

2.3.1.3 Eastside Park Access

2.3.1.3.1 New Park Entrance

The new park entrance would be relocated to the intersection of Windsor Avenue and Mountain View Street. The existing parking lot on Windsor Avenue would be relocated to the north end of the existing JPL parking lot (See Section 2.3.1.15.1, Convert JPL

Parking to Public Parking). The widening of the roadway area at the intersection of Windsor Avenue and Ventura Street with the new park entrance road would require a new retaining wall to the west of the current entrance/intersection. After the new entrance roadway is constructed, the surrounding land would be landscaped with native vegetation, including oak woodland species.

2.3.1.3.2 Realign Park Access Road

The road leading down the slope from the eastside entrance from Windsor Avenue would be realigned to east of the Arroyo Well and follow the easterly edge of the current JPL parking lot. This would allow the spreading basins to be expanded in what was the east JPL parking lot.

2.3.1.3.3 Widen Johnson Field Road

The existing eastside roadway (Johnson Field access road) from the intersection with the JPL access road south toward Johnson Field would be widened to accommodate two lanes of traffic. A turnaround for buses and emergency vehicles at its terminus next to Johnson Field would also be constructed. The intersection with the access road from the Windsor/Ventura entrance to the JPL east side parking lots would be reconstructed to improve safety. The interpretive area would have a loop around the Arroyo Well with spaces for 12 cars and one bus.

2.3.1.4 Water Conservation

Increasingly, water in southern California is becoming a valuable commodity. Allowing more water to recharge the Raymond basin for use and not to pass through the dam to the ocean is a major goal of the master plan. In an average rainfall year, Devil's Gate Dam, with a minimum capacity of 1,400 acre-feet below spillway height (current capacity is 1,424 acre-feet), would allow the basin behind the dam to fill with inflowing water 1 to 3 times. In a drought period, with an average rainfall year, the basin could not even fill up once. The watershed, like a sponge, dries out during drought periods. It must reach a saturation point or have a storm of enough intensity before runoff flows to the basin. In the winter of 1997-98 (El Niño year), the basin could have filled

42 times. Therefore, a sophisticated operating procedure would be developed to balance the goals of water conservation, flood control, and sediment management.

2.3.1.4.1 Seasonal Flood Management Water Conservation Pool

The flood basin behind the dam has been filling with sediment. With an existing capacity of 1,424 acre-feet behind the dam, the capacity of the basin is approaching its minimum of 1,400 acre-feet. Since 1970, when the dam was declared unsafe to hold water, vegetation has been allowed to grow in a 92-acre area that was rarely inundated. With the rehabilitation of the dam and the lowering of the spillway in 1998, this area is now susceptible to flooding. With application of the proposed water conservation measures, the vegetation in this area would begin to die as it is frequently inundated. To create new quality habitat above the spillway elevation and increase the capacity behind the dam to a maximum of 1,900 acre-feet to allow for 500 acre-feet of inflowing sediment capacity, this project component would move 378 acre-feet of material on-site and remove 243 acre-feet of material off-site. This would reduce the area frequently inundated to 69 acres, and create 28 acres for recreational and habitat uses. It would also create a flood pool for the management of inflowing sediment and floating debris, and a water conservation pool to allow the retention of floodwater for pump-back to the upstream spreading basins.

2.3.1.4.2 Pump-Back System

The infrastructure needed to pump water at selected times from a Seasonal Flood Management Water Conservation Pool would be installed (See Section 2.3.1.4.1, *Seasonal Flood Management Water Conservation Pool*) behind the dam, north of the existing improved spreading basins on the east and the proposed spreading basins on the west side of the park, as well as both the eastside and westside lakes (See Section 2.3.1.8, *West Lake*, and Section 2.3.1.13, *East Lake*). A new inlet structure with a pump located near the dam would be created to pump water from the pool and into a new distribution system. The distribution system, including the size of piping and pump, would be designed to take water from the new inlet north along the east side of the basin, at the bottom of the slope and adjacent to other water distribution lines. The total length would be 10,400 linear feet comprised of 2,200 linear feet of distribution from the North Bridge to the West Basins, 4,200 feet from the VOC Water Treatment

Plant (WTP) to the North Bridge, and 4,000 linear feet from the Dam inlet pump to the VOC WTP. The primary distribution would be for the spreading basins; water to the lakes would be provided if seasonal flows allow.

2.3.1.4.3 Overall Storm Drain Modifications

Storm water would enter the proposed Seasonal Flood Management Water Conservation Pool from Flint Wash, from runoff of adjacent lands, and from all storm drain outfalls. This storm water would need to comply with state-mandated water quality standards, including monitoring and clean-up of pollution from runoff. The following storm drains would be extended: the Foothill drain (See Section 2.3.1.6.4, *Foothill Drain Improvements*) by 180 feet, the Berkshire drain by 300 feet, the Altacrest drain (See Section 2.3.1.4.7, *Altacrest Drain Improvements*) by 700 feet, and the Lehigh drain by 400 feet. In addition, 400 cubic yards of concrete removal would be required to shorten the Altadena outfall and align the stream. Runoff pollutants include horticultural fertilizers and pesticides, pathogens from animal manure (dogs and horses), hazardous substances in municipal waste, and oil and grease from motorized vehicles. Remediation may occur at the outfall location in the park, at the pollutant source, or at the inlet to the storm drain, depending on the particular type of pollutant. This becomes important due to the planned pump-back of water held behind the dam for percolation in the spreading basins for recharging the Raymond Basin aquifer, which is a source of drinking water. A fiscally workable solution to some of these pollution problems remains to be found, both technically and scientifically.

2.3.1.4.4 Westside Spreading Basins

Three new basins would be constructed, totaling 9 acres of spreading area on the west side of the park. These basins would require 185,000 cubic yards of material, imported and graded from the stream channel-widening project (See Section 2.3.1.18.1.4). The addition of these new spreading basins would bring Pasadena's total spreading operation to 22 surface acres. The City has the right to divert a maximum of 25 cubic feet per second (cfs) from the Arroyo Seco stream. The City of Pasadena Department of Water and Power has concluded that the optimum water surface acreage for spreading with diversion and pump-back is 22 to 25 acres. The

master plan estimates that there is room for approximately 22 surface acres. The maximum depth of the water in these ponds would be 6feet. This project element would also extend the distribution system for the new spreading from two sources: 1) the diversion of Arroyo Seco and Millard streams and 2) the new pump-back system infrastructure along the east side of the basin. The bridge crossing described in Section 2.3.1.16.3, *North Bridge Crossing*, would be required for the successful completion of the new westside spreading basins, as it provides the means for a utility crossing, including a water diversion and pump-back infrastructure crossings to the westside basins.

2.3.1.4.5 Eastside Spreading Basins

Opportunities for spreading water would be enhanced through the expansion of existing and creation of new basins in the area now occupied by the JPL east parking lot. Testing has shown the rate of percolation of water into the Raymond Basin is greater in this area than in the existing basins. Existing basins numbers 1, 2, 3, and 4 would be expanded to the east. Two new basins would be created to the north of basin 1 and the existing east to west connecting trail. The City of Pasadena's two sludge basins would be relocated and expanded to north of the new spreading basins. This expansion would occupy approximately 75 percent of the current JPL east parking lot and require the export of approximately 2,300 cubic yards of asphalt and construction debris. The completion of this project would allow for the conversion of spreading basins numbers 11 and 12 into a permanent lake (See Section 2.3.1.13, *East Lake*). The amount lost by creating the lake, 4.8 surface acres of water, equals the same area gained by expansion of existing and creation of two new basins in the existing parking lot. The City of Pasadena is required by the Raymond Basin Management Board to maintain and operate this existing total of 13.1 surface acres of spreading.

2.3.1.4.6 Altadena Drain Improvements

Part of the Altadena drain extends into the Arroyo Seco, where this extended concrete box structure was used as part of an earthen breakaway dam that would contain water to divert to the eastside spreading basins. Discontinuing the use of the site as a diversion facility would be recommended. Instead, the Altadena drain would be

shortened and the stream corridor moved (See Section 2.3.1.18.1.1, *Stream Corridor Alignment*) to allow for a more natural stream alignment. This stream corridor would be restored to a riparian habitat, similar to and as a continuation of the same plant community, immediately north of the JPL bridge (See Section 2.3.1.18, *Habitat Conservation*).

2.3.1.4.7 Altacrest Drain Improvements

Discharge from the 40-inch concrete culvert between Gabrielino Trail Road and the JPL east parking lot (just south of the equestrian trail), would enter an underground drain. The alignment of this drain would run between the enlarged existing ponds and empty directly into the stream corridor. An inlet would receive runoff from the road to the remaining eastside parking.

2.3.1.5 Flood Management

An important element of the HWP master plan is flood control or management of storm events for the public safety. The 1919 Lease Agreement between LACDPW and the City designates an area for flood control that encompasses approximately 80 percent of the HWP acreage. Under the most extreme conditions, the area behind the dam, below elevation 1,075 feet above mean sea level (msl) would be subject to flooding.

There are three primary benefits that would result from the conceptual grading plan recommended in conjunction with the flood management program:

- Increased flood control capacity below the 1,040.5 feet msl elevation;
- Reduced frequency of sediment removal with entrance habitat value for riparian vegetation located below the 1,040.5 feet msl elevation; and
- Delineated area dedicated to retention for low frequency flood events would provide up to 30 additional acres for development of passive and active recreation.

The area that is most frequently inundated is below an elevation of 1,040.5 feet msl (the floor of the spillway). The proposed project would maximize capacity below the elevation of 1,040.5 feet msl should for water conservation, sediment management,

and flood management. Currently, the area at this elevation of 1,040.5 feet msl covers 92 surface acres. Much of this area is covered with only a few feet of water when the water level is at spillway height (1,040.5 feet msl). In the conceptual grading plan material would be expected to create a deeper debris and sediment basin. This excavated material would be placed so that approximately 30 acres would then be above the elevation of 1,040.5 feet msl. This raised area would be infrequently inundated, and could be used for park amenities and facilities. The areas that are frequently inundated (at 1,040.5 feet msl and below) would be reduced to 69 acres. An additional 243 acre-feet would be removed from the site to achieve the maximum capacity of the debris and sediment management basin as shown on the conceptual grading plan.

The conceptual grading plan would reduce the effects of the existing water conservation on riparian vegetation below the 1,040.5 foot msl elevation. Water conservation operations, including holding water up to the 1,040.5 foot msl elevation, has the potential to reduce habitat values in riparian habitat, which cannot tolerate inundation of the root crown of native trees in excess of two weeks. Implementation of the conceptual grading plan would require an agreement between the City and LACDPW regarding operation of the debris pool and sediment removal.

2.3.1.5.1 Sediment and Debris Management

The minimum capacity for flood management is the volume below the spillway floor, which is 1,400 acre-feet (2 debris events). This minimum capacity must be maintained. Therefore, as sediment inflow varies from year to year, and as the total volume of inflowing sediment decreases the capacity to the minimum 1,400 acre-feet, sediment must be removed. The grading plan would provide a proposed maximum capacity of 1,894 acre-feet. This grading plan would have an associated 69-acre inundation area, at an elevation of 1,040.5 feet msl. The difference between this maximum capacity and the minimum (1,400 acre-feet) equals 5.5 years of the historical annual average inflow of 145,200 cubic yards of sediment.

The proposed flood management program would require debris and sediment removal of approximately 3,000 cubic yards each summer to maintain and/or restore the dam's lowest opening, the sluice gate. This sediment and debris management plan would

permit the continuing operation of the flow assisted sediment transport (FAST) program, which has accounted over the years for the removal of approximately 20 percent of the inflowing sediment.

Because drought years transport small amounts of sediment, and large sediment transport events occur unpredictably, sediment would continue to be removed from the park on an as-needed basis. This plan would allow for sediment removal to occur in consecutive years. Based on a review of historical data, it is anticipated that sediment removal would be anticipated to occur at intervals of three to seven years.

One of the goals of the master plan is to establish a permitting process that would allow sediment removal to occur on an as-needed basis. This area below 1,030 feet msl, the debris and sediment basin (i.e. water conservation pool), would be shaped not only to facilitate the removal of deposited sediment, but also to influence where sediment is deposited. The conceptual grading proposes to shape the basin with maximum slopes of 3:1 slope. This would maximize the capacity and allow the space to be easily maintained. At elevations of 1,030 feet msl and below, newly deposited sediment, debris, and emerging vegetation overall be routinely excavated. With an incoming storm event, it is ideal to have water at elevations of 1,020 to 1,030 feet msl. This would cause sediment-laden water to slow as it enters the water conservation pool, thereby dropping out the sediment below the established habitat and upstream of the dam, so as to not affect the dam's control features. If water is at 1,040.5 feet msl (spillway height), then sediment would be deposited in the newly widened stream corridor, and would inundate the streambed riparian plant community. As a storm event passes and water continues to enter the basin, it would become less sediment laden. When this occurs, water would be allowed to accumulate to the maximum capacity. This would provide for periodic inundation of the established willow and riparian habitat, with nutrients and water, and accumulate water for the proposed pump-back (See Section 2.3.1.4.2, *Pump-Back System*) for water conservation purposes.

Routine debris removal would be required to achieve the specified habitat benefits. For the safe operation of the dam and downstream floodwater structures, debris would need to be prevented from passing through the dam and obstructing openings in the dam or spillway head works. An area on the east side of the debris and sediment

management basin (i.e., water conservation pool) would be raised to an elevation of 1,045 feet msl, and used as a staging area for equipment to remove floating debris.

2.3.1.5.2 Sediment Removal Access

A permanent haul road would be constructed to facilitate routine debris removal. The existing unpaved road would be extended to connect to Oak Grove Drive. A gate in the perimeter fence would provide sediment removal trucks and maintenance equipment with access to the sediment and debris management basin. The 210 freeway on-ramps at Berkshire Place provide access to all destinations without driving through a residential neighborhood.

2.3.1.6 Oak Grove Area

2.3.1.6.1 Group Picnic Shade Structures

Group picnic areas would accommodate four to six picnic tables. The shade structures, two south and two north of Oak Grove Field, would be designed to fit the natural character of the park and use indigenous materials. The floor of the group picnic area would be graded level and smooth and surfaced with a permeable material such as decomposed granite blended with native soil and a binder. Electricity would be provided to the structure, and amenities such as barbecues with counters, sinks with running water, and gray water drains would be provided. A trash disposal area would also be provided to store multiple cans with lids.

2.3.1.6.2 Westside Picnic Amenities

Group picnic areas and smaller/individual picnic would be provided in the westside park area. The Upper Oak Grove would continue to have a distribution of picnic tables within its use area. The Lower Oak Grove would serve as the location for two designated group picnic areas. The first is in the area south of the Oak Grove Field where two picnic shelters would be provided for group picnics. The other is the east end of the overnight camp area, which would also provide two picnic shelters. Each area would be equipped with one 36-by-36-foot picnic shade shelter and one 36-by-48-foot picnic shade shelter. A minimum of two picnic areas within the westside park

area would be ADA-accessible. There are currently 52 picnic tables within the westside park area. The quantity of picnic tables has steadily decreased over the past several years due to a loss of tables due to age, wear, and misuse. It is estimated that the total number of tables would double to accommodate the use anticipated by the park improvements proposed for the westside park area. Existing picnic tables would be moved to better positions, which would also relieve the compaction on sites where they currently sit. A program to rotate the picnic tables would be implemented, particularly in areas where a table is within the drip line of a tree.

2.3.1.6.3 Oak Grove Field Restroom

The abandoned restroom at the southwest corner of the existing Oak Grove Field would be replaced by a new 2,100-square-foot restroom facility that includes storage. The new restroom facility is east of the former location and at the southeast corner of the renovated Oak Grove Field. A sewage lift station would be constructed. The sewage lift station would transport sewage 700 feet west to the main sewer system on Oak Grove Drive. The new replacement restroom would have one urinal and two stalls for men, and three stalls for women, as well as adequate storage space (20-feet by 30-feet minimum). The facility would also have security/safety lighting installed.

2.3.1.6.4 Foothill Drain Improvements

Increased runoff from the widening of Oak Grove Drive, the Foothill Boulevard park entrance, and a large portion of the La Cañada-Flintridge area has caused severe erosion on the slope above the existing Oak Grove Field. The existing 24-inch concrete drain would be extended 180 feet down the slope and then turn parallel to the Oak Grove Field. The new pipe would be covered over and the slope restored. The new drain would discharge storm water into an improved existing swale that flows south at the base of the slope.

2.3.1.6.5 Outdoor Amphitheater

The existing amphitheater located just west of Oak Grove Field would be restored. The area accommodates approximately 150 children and would not be expanded. Telephone pole seating would be rehabilitated. The approximately 2,400-square-foot

area would be fine-graded and surfaced with the appropriate material to make the area ADA-accessible.

2.3.1.6.6 Sycamore Grove Field

A new 2-acre multipurpose field would be constructed adjacent to and east of the expanded parking lot described in Section 2.3.1.6.1, *Expanded Parking Area*. This area is currently used for temporary overflow parking. The multipurpose play area would be able to accommodate youth tournament soccer, open play, group picnics, and other group and non-group activities. This field size would allow the area to be converted into two practice fields for youth soccer. Under existing conditions, the southern portion of this field is prone to flooding; therefore, the area would be built up from its current elevation of 1,040 feet msl to an elevation of 1,050 feet msl. Fill material for construction of the Sycamore Grove Field and disc golf course improvements would be provided by excavation of 310,000 cubic yards from the conservation pool. During disaster emergencies, the area would continue to be used as a staging area for fire crews and other emergency support groups. A gravity sewer would take the sewage from the restroom in this area to the sewage lift station at the south end of the expanded parking lot and Oak Grove Field.

2.3.1.6.7 Sycamore Grove Restroom

A new 2,100-square-foot restroom, including storage, would be constructed at the north end of the proposed Sycamore Grove Field. It would have one urinal and two stalls for men, and three stalls for women, as well as adequate storage space (20-by-30-foot minimum) and meet current ADA-accessibility standards. The restroom would have a gravity sewer to the sewage lift station and force main at the replacement restroom at Oak Grove Field. One public/emergency telephone would be located at the structure. The facility would also have security/safety lighting installed.

2.3.1.6.8 Upgrade Oak Grove Maintenance Office Sewer [Not on Map]

The Oak Grove Maintenance Office (OGMO) is currently on a septic system. The upgrade of the Oak Grove maintenance office sewer is not shown on Figure 2.3.1-1. The restroom facilities do not need upgrading. The current septic system would be

converted to a gravity flow system that would flow to the proposed sewage lift station near the Berkshire drain, and then get pumped up to the existing sewer main in Oak Grove Drive.

2.3.1.6.9 Disc Golf Course Improvements

The disc golf improvements include relocation of the back nine pins in the north Oak Grove area, and pins 5 through 9 of the front nine to southeast of the existing parking lot, an area of approximately 1,120 square feet. The relocation of the disc golf area provides the opportunity for habitat restoration of the north Oak Grove area. The relocated disc golf course would be developed by excavating material from the water conservation pool area (ruderal habitat areas), and placing the material in the area between the existing willow stands to an average elevation of 1,046 feet msl, which is above the frequently inundated elevation of 1,040.5 feet msl. Fill material for construction of the Sycamore Grove Field and disc golf course improvements would be provided by excavation of 310,000 cubic yards from the conservation pool. Drainage courses in this area would occur within the existing stands of native habitat. A bench would be provided at every pin and constructed to blend in with the environment using natural arroyo stone and materials.

2.3.1.6.10 Expanded Parking Area

This existing 100-space parking lot would be expanded to 220 spaces, immediately east of the Oak Grove Field. The existing parking lot would accommodate 220 cars, including 9 ADA spaces and 2 buses, and would be accessed via the improved access road to this lot. This lot is intended to replace the dirt overflow lot that is being converted to Sycamore Grove Field. This project would be done in conjunction with another element, the removal of existing asphalt paving in the basin (from past mining operations). The removed asphalt would be used as base fill for the new expanded parking lot. A total of 61,000 square feet of asphalt would be used. As a part of this project, the existing access road with a small parking area and space for one bus would be extended and improved to allow for a turnaround for park users, buses, and emergency vehicles. Grading for the extension and turnaround is 21,400 cubic yards.

2.3.1.6.11 Native Plant Nursery

A plant nursery would be established in two phases. Phase I would enhance the existing OGMO by providing materials and equipment necessary to produce native stock for revegetation of Hahamongna Watershed Park and other areas of the Arroyo Seco. Such materials and equipment would include propagation tables, interpretive signage, storage bins for soil and amendments, and a holding area for larger container stock. An adjacent unused area would be incorporated into the OGMO yard for this purpose, with new fencing to delineate the enhanced area.

Phase II would occur when an arrangement can be made with the MWD property to the north. The area currently occupied by the Forest Service has an area that was once actively used as a nursery but has fallen into disrepair. This area has the potential for a larger nursery area and would incorporate the Phase I part of the project by transferring much of that operation to this site. The Phase I site would still be used for plant nursery purposes and staging for habitat restoration projects. A number of amenities exist at this MWD site (equipment storage facilities, growing tables, a watering system for seedlings, etc.) that would make a larger nursery operation much more viable.

2.3.1.7

Supervised Overnight Camping Area

Supervised overnight camping is proposed in the northern portion of the Oak Grove area. The 9.5-acre overnight camping area would be available for individual and groups during the day. Night-time use would be limited to organized groups with proper supervision, such as Boy Scouts, Girl Scouts, or church groups. Overnight group camping facilities would include two shade structures (same as described for the group area south of the Oak Grove Field), six grey water septic outdoor sinks, barbecues, drinking fountains, a renovated restroom, and an area for environmental play and education. Selected campsites and access would be provided for the disabled. Two gathering areas would be created. A fire ring of approximately 400 square feet would provide seating for approximately 30 youth. Seating would be provided by wooden poles or elevated planks for easy maintenance. An outdoor amphitheater would also be sited within the area. It would be a much smaller version of the amphitheater west of the Oak Grove Field but built in the same style and of the same materials. It would accommodate 60 youth and encompass approximately 1,000 square feet.

The overnight camping area would be administered by park staff, who would be scheduled around the clock. The existing Los Angeles County Trail maintenance and storage area would be converted to provide accommodations and administrative space for the park staff. Parking for the overnight campers and two buses would be provided. A trash bin enclosure would be provided adjacent to the staff building. A sewage lift station would be located between the existing restroom and the converted County building (with an added bathroom and kitchenette), with gravity lines from each and a force main to the sanitary sewer main at Oak Grove Drive.

Selected areas of the overnight camping area would be restored to oak woodland. These areas would be identified as restoration areas and corded off from human interference. With the exception of the existing trail(s) at the northernmost edge of the overnight camping area, horse trails through the oak woodland would not be allowed. Hitching posts in the central area of the overnight camping would not be allowed. Hitching posts and a watering trough would be provided at the southeast corner of the overnight camping area, near the turnaround and away from tree trunks.

2.3.1.7.1 Park Ranger Station Improvements

The existing building used by Los Angeles County Trails maintenance would be converted to a park ranger station to oversee the overnight group camping area, adjacent to the asphalt parking lot. A sewage lift station would be located between the existing overnight area restroom and this converted park building (with an added bathroom and kitchenette), with gravity lines from each and a sewage lift station with force main to the sanitary sewer main at Oak Grove Drive.

2.3.1.7.2 Westside Children's Play Area

This project element takes advantage of an existing drainage course in the overnight camping area adjacent to the existing parking area, encompassing approximately 11,000 square feet. Installing a small water pump for the dry months of the year would enhance the course. On-site materials such as boulders, tree logs, dirt, and aggregate would be used to re-create a stream environment in which children can play. A liner would be installed with the on-site materials placed over the liner to create a small natural stream. The liner would assist in allowing the low-flowing water to pool at one end. A water source would be provided to run through the shallow stream and recirculate back to its source. Water could be turned on during the warm summer months and turned off during the cooler months. Both children and adults would be encouraged to wade in the course, play in the mud, etc. Portions of the play area would be ADA-accessible.

2.3.1.7.3 Restroom Improvements

The two existing restrooms in the Oak Grove area, on the upper terrace and in the overnight camping areas would be upgraded with new fixtures, partitions, and other amenities to meet current ADA accessibility standards.

2.3.1.7.4 New Parking Areas

The existing dirt parking area adjacent to the ranger station would be developed as a new 5,000-square-foot decomposed granite parking area to serve the overnight camping area. The parking area would provide 20 spaces for overnight campers west

of the park road (same side as the ranger station). A new masonry enclosure would be constructed to secure trash dumpsters at the rear of the parking area. The overnight camping area (east of park road) would be improved to accommodate a 4,000-square-foot paved drop-off area with space for three buses to pull through.

2.3.1.8 West Lake

This project element establishes a new 4.8-acre lake environment on the west side of the park, east of the overnight camping area. Construction of the new lake is anticipated to require moving 94,200 cubic yards within the lake site, all coming from the Stream Channel Widening project (See Section 2.3.1.18.1.4). The overall lake environment would be approximately 4.8 acres in size. The actual surface area in water would cover approximately 2.7 acres of aquatic habitat and a small inaccessible island of 0.3 acre would be provided for protection of wildlife. The lake would create a wetland of 1.8 acres around the aquatic habitat, provide cultural and habitat interpretation, and provide native plant gathering materials for Native American crafts and medicinal needs. Material removed to create the lake would be used to create the raised south and east sides of the lake. Approximately 30 percent of the lake remains to be excavated, since this area was partially excavated during past mining operations.

Access to the lake for passive recreational activities such as bird watching and fishing would only be allowed around 50 percent of this west lake's perimeter (the eastern edge of this lake would be left for wildlife and human access would be discouraged). Access would be controlled with 800 square feet of raised walkways and overlooks. The observation points would be constructed to sit just above the water's edge so children could actually touch the water but be protected by a barrier rail around the edge of the walkway or overlook. The lake would be fully lined to minimize percolation and would be of a depth to sustain a natural aquatic ecosystem (estimated to be 30 feet at lake's center). The design shall incorporate a shallow shelf at the lake's edge for wetlands habitat and safety. The lake would be fed from diverted stream water, and/or retained flood water (depending on the time of year) that is pumped back to the spreading basins, working its way to the lake by overflowing each basin until it gets to the lake (this would only happen when there is a lot of water in the spreading basins). Infrastructure for this distribution system would be necessary. Depending on stream flows and the amount of water to be pumped back, it is probable that the West

Lake would need domestic water to maintain its surface level due to evaporation; aeration would be used to remove the chlorine.

For safety reasons, the lake would be designed with a shallow shoreline of a 6:1 gradient. A ramp would be provided on one side for maintenance access to the lake. Fishing would be allowed; swimming and boating would not be allowed.

2.3.1.9 Equestrian Staging Area

The equestrian staging area would be improved: improved vehicular access and parking for school bus and horse trailer turnaround, restroom rehabilitation, improved observation area (Sunrise Overlook), trail connections, and picnic amenities for informal gatherings.

2.3.1.9.1 Upgrade and Expand Restroom

During the initial implementation phases of the Master Plan, this restroom would be renovated to meet ADA-accessibility standards and improve the physical appearance. Later, the restroom would be reconstructed to accommodate one urinal and two stalls for men and three stalls for women. The existing restroom would be upgraded with a sewage lift station and force main; this could be combined with the sewer improvements needed at the existing OGMO by gravity feed from both, to a central location next to the Berkshire drain, where a sewage lift station would be located to pump sewage up to the main sewer line in Oak Grove Drive.

2.3.1.9.2 Realign and Widen Access Road

The existing access road would be widened to 24 feet from the upper Oak Grove turnaround and then raised 2 to 4 feet to allow in-coming traffic to enter the parking area on the northern edge and to go over the 60-inch diameter new drainpipe that would be needed for the Berkshire drain upgrade. All vehicular traffic would exit via the southeast corner of the parking area, looping back along the old entry roadway. The softer, wider turns and one-way traffic flow would provide easy access for horse trailers and camp vans. Ten pull-through parking spaces would be provided. These spaces would be used by no more than 2 buses, with the remainder of the spaces

being designated for horse trailers or cars. The existing restroom would be upgraded with a sewage lift station and force main; this could be combined with the sewer improvements needed at the existing OGMO by gravity sewers from both, to a central location next to the Berkshire drain, where a sewage lift station would be located.

2.3.1.9.3 Berkshire Drain Improvements

Increased run-off from the widening of Oak Grove Drive and Berkshire Drive has caused severe scouring of the down-stream drainage swale due to the increased volume of water. This project would build a new transition structure, take the pipe under the widened park road, raise the park road 4 feet, extend the pipe down the slope and exit into the basin on the east edge of the westside basin perimeter trail. This would require removal of concrete and asphalt of 300 cubic yards and 6,000 cubic yards of fill materials that would be excavated from the conservation pool area. The Westside perimeter trail would cross over the Berkshire Drain at this juncture. The erosion on the slope would be filled and the area restored with oak woodland habitat. The upper Oak Grove park road would be widened to allow two lanes of traffic to pass safely from/to the Equestrian Staging Area.

The existing access road would be widened to 24 feet from the upper Oak Grove turnaround. When the Berkshire Drain is reconstructed (See Section 2.3.1.9.3, Berkshire Drain Improvements) the access road to the Equestrian Staging Area would be widened to accommodate two lanes of traffic over the drainage line. The roadbed would be raised 4 feet to accommodate the new drainage line, thus allowing a new, one-way, 14-foot-wide and 260-foot-long road alignment into the staging area. Traffic would loop through the staging area parking lot, exit the far side and return to two-way traffic atop the new drain. The new road configuration would allow school buses and vehicles with horse trailers easier access to the parking area. Ten pull-through parking spaces would be provided. These spaces would be used by no more than 2 buses, with the remainder of the spaces being designated for horse trailers or cars. The existing restroom would be upgraded with a sewage lift station and force main; this could be combined with the sewer improvements needed at the existing OGMO by gravity sewers from both to a central location next to the Berkshire drain, where a sewage lift station would be located.

2.3.1.10 Sunrise Overlook

This project is located on the knoll off of Oak Grove Drive, between Flint Wash and the Equestrian Staging Area (See above, 2.3.1.9, *Equestrian Staging Area*). The 7,000-square-foot area would be cleared of all existing vegetation (including many non-native trees, weeds and some existing native vegetation comprised of seeded sage scrub from the 1970s when the first Foothill Freeway (I-210) off-ramp was removed from this location) and then graded of 6,000 cubic yards to be balanced onsite to create a natural appearing hollow that would accommodate a small group gathering area of approximately 60 people. The site provides a promontory overlook of the basin and the San Gabriel Mountain range in the backdrop. The site would allow groups to gather below the rim of the knoll, to create a sight and sound barrier from Oak Grove Drive and the nearby Foothill Freeway. The carved-out hollow would create an intimate gathering area that would be enhanced with planted oak woodland and provide shade for the users of the site. Existing onsite, large boulders would be used to form the edges of the hollow and contribute to the area's character. Boulders and old, preserved, carved, granite curbing (from Old Pasadena) would be used to create seating terraces. The stage or front of Sunrise Overlook would sit at the top of the existing retaining wall; access would be from the existing trail that leads to this area from the Equestrian Staging area. The site would be ADA-accessible from new trail ramps that would be provided both from the north and the south along the top of the existing retaining wall.

2.3.1.11 West Arroyo Parking

2.3.1.11.1 Construct Parking Structure, Phase Out East Lot

This project would provide for a 1,200-space parking structure on the existing west parking lot. The lot would be accessed via Oak Grove Drive and the JPL campus. Under the proposed master plan, this structure would be made available to recreational park users. It is anticipated that the structure would be 6 stories tall to accommodate the 1,200 spaces.

2.3.1.11.2 West Arroyo Inner Park Access

Further negotiations and approvals would need to be sought with the MWD for exercising the City's right of easement on the road that goes through the MWD property. The City desires using the old park road that bisects the MWD property for both vehicle and bicycle access to the parking structure and as a connection to a paved bike route that would take bike users from the terminus of this road to the JPL Bridge. This element would serve as part of the inner park access road that takes park users to the parking structure on the weekend and provides a needed access to the northwest park area for emergency vehicles. It would also have access to the trash enclosure south of the turnaround.

2.3.1.11.3 Equestrian Refuse Disposal Area

Just outside the MWD property and south of the terminus/turnaround to the West Arroyo Inner Park Road, a new 1,000-square-foot masonry enclosure would be constructed to secure containers for the disposal of equestrian refuse. Three City dumpsters would be provided for conventional solid waste and a roll-off bin would be provided by a private refuse company capable of disposing of horse waste. The enclosure would have the appropriate drainage and catchments to prevent any runoff.

2.3.1.12 Eastside Park Area

2.3.1.12.1 Renovate Johnson Field

Currently, Johnson Field is designated for private use only. This project element would allow for public access and an upgrade of the field to accommodate both soccer and softball. The 56,000-square-foot field would accommodate a youth-size soccer field, open play, picnic area, and other group/non-group activities. The size of the field would also allow it to be converted into 2 practice fields for youth soccer. During disaster emergencies, this area can be used as a staging area for fire crews and other emergency support groups. The field floor of Johnson Field would be raised 6 to 12 inches to ensure a uniform grade as well as a good growing medium for the establishment of the athletic field turf. The 3,000 cubic yards of fill required for this project element would be imported.

2.3.1.12.2 Convert Basin 13 to Play Field

This project element is located immediately north of Johnson Field on the site of former settling basin number 13. The field would accommodate a 49,000-square-foot youth-size soccer field, open play, picnic area, and other group/non-group activities. The size of the field would also allow it to be converted into 2 practice fields for youth soccer. Development of the field would include the provision of 12 picnic tables. During disaster emergencies, this area can be used as a staging area for fire crews and other emergency support groups. This field is currently a spreading basin that has not functioned as a spreading basin in recent history. The bottom of this basin is currently at 1,040 elevation; the master plan proposes raising the floor of this basin by 10 feet (to an elevation of 1,050) by using the material excavated from the new East Lake as the fill material for this project element. This results in moving the needed fill material the shortest distance from a needed excavation area.

2.3.1.12.3 New Restroom

A new 2,100-square-foot restroom facility, including a 20-by-30-foot storage area for maintenance user group materials and equipment, would be constructed. The new restroom would have one urinal and two stalls for men and three stalls for women and meet current ADA-accessibility standards. The restroom would have a sewage lift station located at the south end of the new parking (See Section 2.3.1.12.6, *Parking Improvements*) and force main to the main sewer on Lehigh Street through 600 feet of new pipeline. In addition, a new trash enclosure in this area would be included. A new emergency public phone would also be installed.

2.3.1.12.4 Eastside Picnic Amenities

Both picnic group areas and smaller/individual picnic areas are planned for the eastside park area. The area adjacent to Johnson Field would continue to have a distribution of picnic tables within its use area. Group picnic areas would be equipped with two picnic shelters approximately 36-by-36 feet in size. A minimum of two picnic areas within the eastside park area, would be ADA-accessible. Existing picnic tables would be moved to better positions.

2.3.1.12.5 Eastside Children's Play Area

An 11,000-square-foot play area similar to the westside play area would be created in the vicinity of the eastside multipurpose fields. An assemblage of boulders would in essence serve as a climbing structure and the addition of water to the structure could be turned on during the warm summer months and turned off during the cooler months. Some boulders would be carved out to create small pools of water. The boulders would be in the lake overflow drainage course, which would be lined so the water could be recirculated as in the project element described above for the west side.

2.3.1.12.6 Parking Improvements

The dirt shoulders adjacent to the Johnson Field access road are currently used for informal parking. This same area would be paved with asphalt to create parking bays along the access road to accommodate 200 vehicles and 2 buses. This parking area is planned to service all of the passive and active recreational uses within this area of the park. There would be a turnaround for buses and emergency vehicles at the south end of this parking area next to Johnson Field.

2.3.1.12.7 Interpretive Area and Parking

This project element would create a 2.5-acre area for an interpretive area and picnic area with parking and drainage improvements located at the intersection of Arroyo Well and Johnson Field Road. Enough parking for 2 buses and 10 cars would be provided. This location serves as an ideal destination for viewing four of the basin's plant communities in very close proximity to each other. Interpretive signage and

ADA-accessible trails would all be provided. Picnic tables (4) for approximately 32 people would be provided at this location. Interpretive signage on the geology and hydrology of the area would be provided here as well.

2.3.1.13 East Lake

This project establishes a new lake on the east side of the park, north of Johnson Field and the new eastside multipurpose field. The overall lake environment would be approximately 3.6 acres in size. The actual surface area in water would cover approximately 2.3 acres of aquatic habitat and a small, inaccessible .3-acre island would be provided for protection of wildlife. The lake would create 1 acre of wetland, provide cultural and habitat interpretation, and provide native plant gathering materials for Native American crafts and medicinal needs.

Access to the lake for passive recreational activities such as bird watching and fishing would be controlled with raised walkways and overlooks at various points around the entire lake perimeter. The accesses would be constructed to sit just above the water's edge so children could actually touch the water but be protected by a barrier rail around the edge of the walkway or overlook. The lake would be fully lined to minimize percolation and would be of a depth to sustain a natural aquatic ecosystem (estimated to be 30 feet at the lake's center). The design would incorporate a shallow shelf at the lake's edge for wetlands habitat and safety. The lake would be fed from diverted stream water, and/or retained flood water that is pumped back to the spreading basins, working its way to the lake by overflowing each basin until it gets to the lake. Infrastructure for this distribution system would be necessary. When necessary, due to evaporation, treated un-chlorinated water from the VOC water treatment plant would be pumped directly into the east lake to maintain its surface level.

For safety reasons, the lake would be designed with a shallow shoreline of a 6:1 gradient. A ramp would be provided on one side for maintenance access to the lake. Fishing would be allowed; swimming and boating would be prohibited.

2.3.1.14 Sunset Overlook

The Sunset Overlook would be located on the east side of the park, immediately north of the Windsor/Ventura intersection. This approximately 0.5 acre consists of west facing promontory outlook, providing an overview of the basin from this side of the park. The Sunset Overlook effort would consist largely of a clean-up and restoration project: the area would be cleared of all weeds, brush and dead trees; the area would be planted as specified in the habitat restoration plan. Picnic tables (4), seating and interpretive signage would be provided at this site for visitors to learn of the area and to understand what they are viewing from this location. The overlook is located at the main eastside park entrance. The project element would most greatly serve as an inspirational and educational opportunity. The site would overlook water conservation elements of the park, habitat restoration areas of the park as well as stream corridor restoration in the park. The site would provide parking for 1 bus or 4 cars.

2.3.1.15 *Gabrielino Trail Area*

2.3.1.15.1 Convert JPL Parking to Public Parking

The existing parking lot on the coast side of the arroyo, leased for exclusive use by JPL, would be converted to public use. The parking lot would continue to have a capacity of 600 parking spaces.

2.3.1.15.2 New Public Restroom

A new restroom would be constructed adjacent to the proposed park visitor parking lot at the north end of the new public parking lot and serve park visitors using HWP as well as those visitors headed into the Angeles National Forest. It would have one urinal and one stall for men and two stalls for women and meet current ADA-accessibility standards. It would have a small storage area. A public telephone would be located at the structure. This restroom may need a sewage lift station with force main to the JPL gravity lines across the JPL bridge.

2.3.1.16 Trail Development

2.3.1.16.1 Perimeter Trail

Development of the perimeter trail would provide 13,200 linear feet for equestrians and hikers that would allow a complete circuit of HWP. The perimeter trail would have a width of 12 to 16 feet. Development of this trail incorporates existing trails and would be completed through the addition of approximately 3,000 linear feet of new trail in the west side of HWP and finish grading in association with the new Sycamore Field and the disc golf course on the west side. This trail would also be available for security, emergency responses and maintenance vehicles.

The trail would have a minimum elevation of not less than 1,045 feet msl elevation (4.5 feet above the 1,040.5 feet msl spillway elevation), so that it can be accessed during most storm events. Storm drains would be installed under the perimeter trail at critical cross-drainage points to eliminate trail washouts and to avoid disturbing existing drainage patterns entering the basin.

The perimeter trail would serve as a habitat protection delineator; above and outside the perimeter trail, various improvements would be for human benefit. Below and inside the perimeter trail, plant and animal habitat would be restored to quality habitat and allowed to thrive by minimizing human interference.

The construction of the proposed perimeter trail would require a number of project elements to connect various junctures and crossings as well as segments of new trail. The trail would begin at the west end of the dam and follows the proposed alignment in a clockwise pattern.

2.3.1.16.2 Flint Wash Bridge Crossing

The bridge would provide for the missing link in the park perimeter trail system by providing a critical, unifying link between the east and west sides of the park. The west end of the dam would be connected to the westside park via a bridge crossing over Flint Wash. This crossing would be accomplished with a prefabricated metal bridge with wood flooring to span approximately 150 feet across the wash and 12 feet

wide. The crossing would utilize an existing abutment from a previous bridge in this same location. This crossing would be used by all visitors including bicyclists, equestrians, and hikers. Bicyclists would come onto the dam via the proposed access off of Oak Grove Drive, cross the dam, cross Flint Wash Bridge and then ride into the Oak Grove area of the park via the paved park road. Equestrians and hikers would come onto the dam via the eastside perimeter trail, the east rim trail or from the south via the Arroyo Seco Trail (part of the Santa Monica Mountains Conservancy's Rim of the Valley trail network), cross the dam, cross Flint Wash Bridge and then travel west up Flint Wash Trail (part of the Rim of the Valley Trail network) or north on the westside perimeter trail. So, the dam and Flint Wash Bridge are "shared" crossings for these various user groups along with emergency and maintenance vehicles.

The portion of the trail on the west side, in the vicinity of Berkshire drain would be raised from its current 1,030 to 1,038 feet msl elevation to a 1,045 feet msl elevation to ensure it is out of the frequent flood zone.

The portion of the trail at the south and east edge of the relocated disc golf area would need to be raised from its current 1,030 feet msl elevation to a 1,045 feet msl elevation to ensure it is out of the flood zone.

The portion of the perimeter trail east of the relocated disc golf area and the new "Sycamore Grove Field" would extend north to the edge of the west lake, around the lake on the western edge and north along the western edge of the new west side spreading basins to the west side JPL parking lot.

Another shared juncture of the perimeter trail is the section from the southern end of the JPL west side parking lot (the site of the proposed 1,200 space parking structure) all the way north to the JPL bridge. This section of trail would be shared with a separately paved bicycle way that would allow bicycle riders to travel from/to the paved road within the Oak Grove area (See Section 2.3.1.11.2, *West Arroyo Inner Park Access*) and along this stretch of trail, across the JPL bridge and up into the Angeles National Forest Trail system or into the JPL campus or south on the eastside park road and out the eastside park entrance at Windsor/Ventura.

2.3.1.16.3 North Bridge Crossing

The Northerly Perimeter Trail Bridge Crossing would be made of a style and material similar to the Flint Wash Bridge crossing and would serve as the northerly connection between the westside and eastside parks. Hikers, equestrians, and maintenance/emergency vehicles would share the crossing. The bridge would span 150 feet and be 12 feet wide. The bridge would also serve as a utility crossing for water and power lines needed for eastside uses in which maintenance and emergency vehicles would share the crossing. Appropriate signage would be posted. This bridge would provide the missing link in the park perimeter trail system of all-weather, all-year access from the west side of the park to the east side for park users, emergency and maintenance vehicles.

The eastside segment of the perimeter trail is on the western edge of spreading basins 3 through 12 (new spreading basin numbers), the east lake, the new multi-purpose field and Johnson Field. This alignment would be shared as a flood maintenance access road as it extends south, to the dam.

2.3.1.16.4 East Rim Trail

Development of the East Rim Trail for pedestrians and equestrians consists of enhancing the existing trail that currently extends from the VOC WTP to the Arroyo Well and from the Arroyo Well to the Altacrest Trail, with construction of approximately 2,600 linear feet of new trail for a total of 6,300 linear feet. This would be graded four feet wide to accommodate pedestrians and equestrians. Construction of the East Rim Trail would require approximately 1,200 cubic yards of cut and fill to be balanced onsite. This project would extend the existing trail that roughly follows the upper rim of the eastside slope. The trail would be constructed to the bottom of the mid-slope parallel to the road leading to Johnson Field. It would cross the entry access road close to the proposed Interpretive Area and skirt the backside of the existing parking lot, joining up to the existing Altacrest Trail. To further clarify, this is a new trail going from the VOC WTP to the Arroyo Well as well as the reconstruction of an old trail from the Arroyo Well to the northern east/west connecting trail.

2.3.1.16.5 Trail Connections from East Rim Trail to Basin Perimeter Trail

Four trail connections would be provided along the east side linking the upper rim trail to the lower perimeter trail. Each of the trail connections would be four feet wide to accommodate pedestrians and equestrians. It is anticipated that cut and fill can be balanced within the segments. Construction of the four trail connections would require approximately 30 cubic yards of cut and fill to be balanced onsite. These connections would allow pedestrians and equestrians to access eastside park features from the upper East Rim Trail and park users to avoid or bypass sediment/debris removal operations as necessary.

2.3.1.16.6 West Rim Trail and Connectors

The West Rim Trail starts at the west end of the Flint Wash Bridge, past the Equestrian Staging Area, then heads north through the upper Oak Grove area on the westerly edge of the park, continues north through the MWD property where it then converges with the basin perimeter trail. Portions of the West Rim Trail run parallel with but are separated from the bike route; this occurs in two locations on the West Rim Trail: 1) in the stretch from the Equestrian Staging Area to the Flint Wash Bridge and 2) through the MWD property. Pedestrians and equestrians traveling south from the equestrian tunnel currently crosses the main entry access road entering HWP from Foothill Boulevard. This component would reroute approximately 400 feet to a lower elevation to avoid conflicts with vehicle traffic at the Foothill Entrance. The new trail would connect to the existing trail just south of the big bend at the entrance.

2.3.1.16.7 Trail Connections from West Rim Trail to Basin Perimeter Trail

This component replaces the existing stairs connecting the upper level to the lower level, which is eroded and unsafe. A new trail linking the upper terrace restroom to the south end of the Oak Grove Field and back up to the West Rim Trail, via the reconstructed old trail to the Foothill Boulevard park entrance, would be constructed. Each segment is 260 linear feet from a total length of 520 feet.

2.3.1.16.8 Dam Observation Trail

The Dam Observation Trail establishes a trail loop from the eastern end of the reconstructed Flint Wash Bridge along the top of an existing retaining wall down to an elevation of 1,045 feet, and west to an observation point and back up to the western end of the Devil's Gate Dam. This trail connection would be approximately 400 feet in length and accessed by pedestrians only. This would require approximately 37 cubic yards of cut and fill to be balanced onsite. From the top of the old bridge abutment, park users have a clear view of the interior face of the dam and the water conservation pool area.

2.3.1.17 Bicycle Route

Bicycles would be allowed to travel on any existing or proposed paved surface within the park. Bicycles would not be allowed on any designated trail or unpaved surface within the park. The bicycle routes are planned to allow bicyclists to utilize the perimeter of the park and to access bikeways outside of the basin, including the routes within the Angeles National Forest. The planned route also allows riders to access the nearby existing Class III Kenneth Newell Bikeway and the Central Arroyo Seco and the southern reaches of the Arroyo Seco in Pasadena and beyond. Access across Devil's Gate Dam and Flint Wash Bridge by bicycles would be allowed. The segment of the perimeter trail on the west side of the park from the proposed parking structure to the JPL bridge would also be shared by bicyclists, equestrians and hikers; a separate paved bike route would be provided along the edge of this segment of the perimeter trail. A separate paved 10-foot-wide bike route would extend from the existing south end of the westside JPL parking lot, north to the existing JPL bridge. At this point, riders could continue on the Gabrielino trail.

Further negotiations and approvals would need to be sought with JPL and the MWD for portions of the proposed bicycle route.

2.3.1.18 Habitat Conservation

Habitat establishment and restoration is proposed throughout the Hahamongna Watershed Park area. Habitat establishment is the creation of new quality habitat in an area where a particular plant community is not present (in existing rural areas) or involves adding area to an existing plant community. Habitat restoration is the

improvement of quality and diversity in an area where a plant community already exists. In general, all plant communities that are not impacted by proposed projects with grading, removal of exotic species, or destroyed by inundation, would be restored. The information within this section is presented in two parts. Section 2.3.1.18.1 is a listing of major Habitat Projects proposed by the plan. These projects would be completed at specific locations within the park. Some of these Habitat Projects would involve the restoration of more than one plant community within the same project and have been organized due to Park Project phasing. Their listing is intended to merely help convey the location, intent and magnitude of the proposed habitat establishment and restoration projects. Section 2.3.1.18.2 encompasses the goal of habitat establishment and restoration throughout the park and describes projects by Plant Community, linking the various projects previously described in this report to their proposed habitat establishment and/or restoration goals including an indication of the acreage affected. The projects in Section 2.3.1.18.1 are separated and listed in their appropriate plant community listing in Section 2.3.1.18.2. Subsequent to the approval of the Hahamongna Watershed Park Master Plan (HWPMP), the U.S. Fish and Wildlife Service designated critical habitat for the federally listed southwestern arroyo toad. Thirteen restoration projects would be wholly or partially located within designated critical habitat for the southwestern arroyo toad.

2.3.1.18.1 Proposed Restoration Projects

The HWP describes 13 proposed restoration projects. The HWPMP includes descriptions, maps, and planting guidelines. This section provides a summary of the thirteen restoration projects that would be completed as a result of the HWP.

2.3.1.18.1.1 Stream Corridor Alignment ²

This restoration project would be undertaken in the area that extends from just south of the Altadena Drain and continues north to the JPL bridge where the stream has been channelized. The Altadena drain extends into the Arroyo Seco stream corridor where at one time it was utilized as part of an earthen breakaway dam, to contain water,

² Habitat Restoration Project lies wholly or partially within designated critical habitat for the Southwestern Arroyo Toad.

which was then diverted to the eastside spreading basins. Use of the site as a diversion facility will be discontinued. The Altadena drain would be shortened and the stream corridor widened to allow for a more natural stream alignment. This stream corridor would be restored to a riparian habitat, similar to and as a continuation of the same plant community immediately north of the JPL Bridge.

2.3.1.18.1.2 Riversidean Alluvial Fan Sage Scrub ³

This restoration project would involve a number of smaller projects, within a larger area. The larger area includes two plant communities: riversidian alluvial fan sage scrub, and sage scrub. The areas on either side of the stream corridor, to the eastside spreading basins and to the westside JPL perimeter fencing and new westside spreading basins, would be restored to these plant communities. The current equestrian trail on the westside of the existing spreading basins traverses some of the best old alluvial fan sage scrub in the area. The equestrian trail will be abandoned and relocated to the spreading basins maintenance road (asphalt to be removed). The existing trail would be revegetated with sage scrub.

Habitat restoration would also be undertaken at the various drain outfalls along the JPL border. Exotic species and debris would need to be removed. The riversidian alluvial fan sage scrub or sage scrub habitat would then be restored.

Similarly, the old stream crossings (from both the east and west) have been covered over in asphalt by past mining operators. Most of this asphalt has been removed. The remaining asphalt would be removed thus allowing the stream to take its course and riversidian alluvial fan sage scrub habitat restored.

Additionally, riversidian alluvial fan sage scrub would be established at the southern end of this area, where it transitions to a streambed riparian plant community. With the Stream Channel Widening Project (See Section 2.3.1.18.1.4) both the streambed riparian and the alluvial fan sage scrub plant community areas would be enlarged.

2.3.1.18.1.3 Habitat Establishment at Spreading Basins ⁴

The existing spreading basins would be expanded and relocated. There would be three restoration project sites: (1) Project 3a comprises nine surface acres of new spreading basins to be numbered 13, 14, and 15 on the west side and would involve

³ Ibid.

⁴ Ibid.

the removal of ruderal weedy species. The embankment of the new ponds would be planted with sage scrub species. Over-story tree species need to be considered because of the water they naturally draw for their establishment and growth, which could be contrary to the water conservation goal. If acceptable, sycamore woodland would be planted around the perimeter of the spreading basins. (2) Project 3b would involve two new basins north of basin 1 and the expansion of spreading basins 1 through 4 on the eastside. (3) Project 3c would involve spreading basins 5 through 10 on the eastside.

2.3.1.18.1.4 Stream Channel Widening ⁵

The stream channel would be widened on its western edge for a total stream channel width of approximately 200 feet. This project would be located in the narrow riparian corridor (approximately 100 feet wide) between the existing riversidian alluvial fan sage scrub area and the area that would be graded for the water conservation and sediment management pool. The existing established vegetation and drainage course configuration would be preserved with the new stream corridor area adjacent and to the west. Embankments of the stream could be stabilized to help control erosion where further study indicates that it is necessary.

2.3.1.18.1.5 East Entrance Habitat Establishment ⁶

This project involves the reconfiguration of the existing Windsor/Ventura intersection as well as the enhancement of Sunset Overlook, situated north of this intersection. Landscaping adjacent to the new park entrance would total 0.3 acre and the Sunset Overlook would total 0.5 acre, consisting of native plants from the sage scrub and coast live oak woodland plant communities to enhance the appearance of the area and to benefit certain wildlife species. The importance of this area as a park entrance and the great absence of landscaping provided the opportunity for both a park project and a habitat establishment project to occur.

⁵ Ibid.

⁶ Ibid.

2.3.1.18.1.6 Interpretive Area ⁷

A handicap-accessible trail for viewing the interpretive area and restoration project would be provided on the east side of the basin, adjacent to the central spreading basins and on the west-facing slope at the base of the east park entry road. The existence of several terrestrial natural plant communities located immediately adjacent to each other in a relatively small geographic area could provide an excellent opportunity for the creation of this interpretive area. The project includes the four plant communities: coast live oak woodland, sage scrub, riparian alluvial fan sage scrub, and elements of southern sycamore riparian woodland. In addition to the educational opportunity to study the diverse flora that exists throughout the park at this one location, this site would also have interpretive information about water conservation.

2.3.1.18.1.7 Westside Perimeter Trail ⁸

The elevation of the perimeter trail would be raised to an elevation of 1,045 feet above (msl). A graded slope of habitat from the westside perimeter trail down to the conservation pool rim elevation of 1,030 feet msl would be created for the re-establishment of southern willow scrub that would be infrequently inundated up to elevation 1,040.5 feet msl. Material for the proposed fill would be excavated from the ruderal areas within the proposed conservation pool below elevation 1,030 feet msl. The existing vegetation in the area would be hand cleared to leave willow trees that are taller than the depth of fill. After the fill is placed, these existing willows would root at the higher elevation with the help of water conservation management practices. Additional revegetation would create a larger area of southern willow scrub of higher quality than that which currently exists.

2.3.1.18.1.8 Sycamore Field and Relocated Disc Golf ⁹

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

The elevation of the area that has small pockets of existing willows with large expanses of ruderal habitat between them. The small areas of existing willows would be linked and receive less fill to create drainage courses with raised terraces of mule fat (disc golf fairways) between. The drainage courses would be extensions of existing drainage from elevation 1,050 feet msl down to elevation 1,030 feet msl, the edge of the water conservation pool. The perimeter trail at elevation 1,045 feet msl would be on the eastern edge of this area. The relocated disc golf and the new Sycamore Grove field within this area slopes from elevation 1,050 feet msl down to the perimeter trail and then down to the conservation pool rim elevation of 1,030 feet msl. Material for the proposed fill would be excavated from the ruderal areas within the proposed conservation pool, below elevation 1,030 feet msl. The existing vegetation in the area to be raised would be hand cleared leaving willow trees that are taller than the depth of fill. After the fill is placed, these existing willows would root at the higher elevation with the help of water conservation management practices. Additional revegetation would create a larger area of high quality southern willow scrub.

2.3.1.18.1.9 Sunrise Overlook ¹⁰

Coast live oak wood located along the northern edge is located at the southwestern corner of the park, along Oak Grove Drive and immediately northwest of Flint Wash, south into the overlook. Sage scrub revegetation would be undertaken in conjunction with coast woodland restoration.

2.3.1.18.1.10 Oak Woodland Restoration (partial) ¹¹

The Oak Grove areas on the west side of the park would be diversified by using native species prescribed for coast live oak woodland restoration. Young oaks would be in the existing ruderal open areas to enhance the survival of this mature oak woodland community. Oak and other restoration plantings at the camping area and group activity areas in the park would be protected until reaching maturity.

¹⁰ Ibid.

¹¹ Ibid.

2.3.1.18.1.11 East and West Lakes ¹²

Two new lakes would be constructed within the park. The creation of aquatic habitat with wetland habitat on the perimeter of the new lakes would be created using established methods. A small inaccessible island of southern willow scrub in each lake would provide protected habitat for wildlife.

2.3.1.18.1.12 Sycamore Woodland (partial)¹³

The creation of sycamore woodland would be undertaken at elevation 1,030 feet msl to 1,040 feet msl, immediately south of Johnson field. This mule fat habitat would be periodically inundated every winter season. To improve habitat quality, it is recommended to raise the grade in the area to elevation 1,045 feet msl and create sycamore riparian woodland. The establishment of native tree species such as sycamores and cottonwoods would be desirable for this area; to the east and north of this area are western sycamore, black cottonwoods and Mexican elderberry, all of which have naturalized. Sycamore Woodland would also be planted around the perimeter of the east and west spreading basins and around the edges of the multipurpose play areas and lakes.

2.3.1.18.1.13 Flood Management and Water Conservation Pool ¹⁴

The existing riparian southern willow scrub habitat below the 1,040 feet msl elevation would be expected to degenerate and begin to die as soon as water conservation practices are implemented. With implementation of the flood management and conservation pool, these areas would be periodically inundated during the winter season. The habitat below the 1,030-foot msl elevation would be completely submerged for varying lengths of time. The 1,030 to 1,040-foot msl elevation zone

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

around the water conservation pool would be quality habitat that could be subject to several inundations a year. Emerging vegetation, debris, and sediment would need to be periodically removed from the newly established water conservation pool per the sediment management guidelines that would be established by LACDPW. A phased operation would permit the area elevated above the floodplain (elevation 1,040 feet msl), and the perimeter of the water conservation pool (elevation 1,030 to 1,040 feet msl), to become established with southern willow scrub habitat. The existing riparian southern willow scrub areas (below elevation 1,030 feet msl) would be removed in a coordinated sediment and debris removal operation, establishment of sycamore woodland between 1,030 to 1,040 feet msl.

2.3.1.18.1 Habitat Establishment and Restoration Projects listed by Plant Community.

Table 2.3.1.18.2-1, *Existing and Proposed Natural Plant Communities and Landscaped/Developed Areas within Hahamongna Watershed Park*, summarizes the existing and proposed area of natural plant communities and landscaped/developed areas within Hahamongna Watershed Park.

**TABLE 2.3.1.18.2-1
EXISTING AND PROPOSED NATURAL PLANT COMMUNITIES AND
LANDSCAPED/DEVELOPED AREAS WITHIN HAHAMONGNA
WATERSHED PARK**

Area Description		Existing Acres	Proposed Acres
OW	Coast Live Oak Woodland	26.2	30.8
W	Southern Willow Scrub	25.5	21.0
SS	Sage Scrub	39.9	42.6
RAFSS	Riversidean Alluvial Fan Sage Scrub	17.2	18.8
MF	Mule Fat Scrub	19.5	11.0
SSRW	Southern Sycamore Riparian Woodland	2.6	21.2
R	Ruderal	75.4	0.0
SBR	Streambed Riparian	8.1	8.3
A	Aquatic	0.0	5.0
WT	Wetland	0.0	2.8
WA	Water Conservation Pool	0.0	54.4
L	Landscaped	5.8	9.6
D	Developed	60.0	56.8
D&L	Developed and Landscaped areas not shown within a plant community polygon (such as a trail, dirt road, picnic & camping site, disc golf fairways and pole climbing area)	10.6	8.5
TOTAL PARK ACREAGE¹⁵		290.8	290.8

There are landscaped and developed areas within the Hahamongna Watershed Park (HWP). The landscaped areas within the Hahamongna Watershed Park include predominantly non-native landscaping for playing fields and native landscaping for ornamental purposes. The developed areas within Hahamongna Watershed Park

¹⁵ Does not include the areas of Flint Wash and below the north side of the 210 freeway (included in CAMP). Both are within the Park property boundary but outside the study area. These areas total 10.1 acres.

include predominantly roads, parking and buildings, with native landscaping for ornamental purposes.

Coast Live Oak Woodland. There are currently 26.2 acres of Coast Live Oak Woodland within Hahamongna Watershed Park Master Plan (HWPMP) that would receive habitat restoration. Table 2.3.1.18.2-2, Habitat Establishment and Restoration of Coast Live Oak Woodland, lists projects that will provide for habitat establishment and restoration of Coast Live Oak Woodland.

**TABLE 2.3.1.18.2-2
HABITAT ESTABLISHMENT AND RESTORATION OF COAST LIVE OAK
WOODLAND**

Project	Existing Acres	Proposed Acres
West Side of Park	20.2	23.8
East Side of Park	6.0	7.0
TOTAL	26.2	30.8

West Side of Park

Three sites would provide total 3.6 acres of habitat establishment:

Oak Woodland Restoration (Habitat Project No.10 in Section 3.3 of the HWP): This element, which includes the upper Oak Grove Picnic area and Equestrian staging area, have been undergoing habitat restoration for five years. An additional 1.9 acres of oak woodland would be provided. This area, and the slopes down to the Lower Oak Grove area including the Oak Grove Field and the west half of the overnight area.

Oak Woodland Restoration (Habitat Project No.10 in Section 3.3 of the HWP):¹⁶ An additional 0.8 acre of oak woodland would be provided in the east half of the overnight area which is designated the critical habitat for the arroyo toad.

¹⁶ Habitat Restoration Project lies wholly or partially within designated critical habitat for the Southwestern Arroyo Toad.

Sunrise Overlook (Habitat Project No.9 in Section 3.3 of the HWP): An additional 0.9 acre of oak woodland would be provided to the Sunrise Overlook area.

Eastside of the Park

Three project sites would provide a total 1.0 acre of oak woodland habitat establishment:

East Spreading Basins (Habitat Project No.3b in Section 3.3 of the HWP):¹⁷ Adjacent to the west boundary of the new eastside spreading basin No. 2, the existing 0.1 acre of oak woodland would be increased by 0.2 acre for a total of 0.3 acre.

Interpretive Area (Habitat Project No.6 In Section 3.3 of the HWP):¹⁸ The existing 0.4-acre oak woodland would be increased by 0.3 acre for a total of 0.7 acre.

East of the Eastside Lake and Playfield areas (in Section 3.3 of the HWP):¹⁹ This existing 1.1 acres of oak woodland would be increased by 0.5 acre for a total of 1.6 acres. This would enhance the habitat adjacent to the East Rim Trail where it overlooks the proposed new parking area for the Eastside Lake and playing fields. It would convert 0.5 acre of sage scrub to oak woodland.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

Southern Willow Scrub. There are currently 25.5 acres of southern willow scrub in the park, of which only 7.7 acres would be subject habitat restoration. When water conservation measures are implemented, the remaining 17.8 acres of existing habitat would begin to die as the area is frequently inundated. An additional 13.3 acres of habitat would be established along with the 7.7 acres of habitat to be restored. The following Table 2.3.1.18.2-3, *Southern Willow Scrub*, lists the projects that are proposed for habitat establishment and restoration of southern willow scrub.

**TABLE 2.3.1.18.2-3
SOUTHERN WILLOW SCRUB**

Project	Existing Acres	Proposed Acres
Stream Corridor Alignment (Project 1) ²⁰	0.8	0.8
West Spreading Basins (Project 3a) ²¹	0.0	1.2
Stream Channel Widening (Project 4) ²²	0.6	3.6
West Side Perimeter Trail (Project 7) ²³	0.6	1.9
Relocate Disc Golf (Project 8)	4.5	5.2
East & West Lake Islands (Project 11) ²⁴	0.0	0.6
Water Conservation Pool (Project 13)	1.2	5.7
Storm Drain Improvements ~ JPL ²⁵	0.0	0.2
SUBTOTAL	7.7	21.0
Habitat lost due to inundation (water conservation)	17.8	
TOTAL	25.5	21.0

Stream Corridor Alignment (Habitat Project No.1 in Section 3.3 of the HWP:²⁶ This project would keep the size of the habitat area unchanged, but would restore habitat found at the southern end of the project area.

²⁰ Ibid.

²¹ Ibid.

²² Ibid.

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

West Spreading Basins (Habitat Project No.3a in Section 3.3 of the HWP):²⁷ There is currently no southern willow scrub habitat West Spreading Basins. 1.2 new acres of this plant community would be established at the spreading basins. The creation of the westside spreading basins would utilize "Landform Grading" principles to improve habitat for this and other plant communities.

Stream Channel Widening (Habitat Project No.4 in Section 3.3 of the HWP):²⁸ The stream channel is proposed to have the existing 0.6 acre of southern willow scrub increased by 3.0 acres for a total of 3.6 acres. The stream would be widened on its western edge for a new total stream channel width of approximately 200 feet. Both the east and west sides of the stream channel would be restored with this plant community. Southern willow scrub would be used on the embankments of the stream to naturalize this habitat for native fauna and to help stabilize and control erosion of the stream banks.

Westside Perimeter Trail (Habitat Project No.7 in Section 3.3 of the HWP):²⁹ The existing 0.6 acre of southern willow scrub along the Westside perimeter trail would be increased by 1.3 acres to a total of 1.9 acres. The grade would be raised on this trail with fill excavated from ruderal areas below the 1,030 elevation within the proposed conservation pool. Those willows that are taller than the depth of fill would remain to root at the higher elevation with the help of water conservation management practices. This and additional habitat restoration would create a larger area of southern willow scrub of higher quality than that which currently exists.

Relocate Disc Golf (Habitat Project No.8 in Section 3.3 of the HWP):³⁰ The existing 4.5 acres of southern willow scrub within the Disc Golf relocation area would be increased by 0.7 acre to a total of 5.2 acres. The elevation of the area that has small pockets of existing willow scrub habitat would be raised. The areas of existing willows would be

²⁷ Ibid.

²⁸ Ibid.

²⁹ Ibid.

³⁰ Ibid.

linked to create drainage courses that would receive less fill than the terraced areas of this project. The drainage courses would be extensions of the existing drainage patterns from elevation 1,050 feet msl down to elevation 1,030 feet msl, the edge of the water conservation pool. The existing vegetation in the area would be hand cleared to leave willow trees taller than the depth of fill. After the fill is placed, these existing willows would root at the higher elevation with the help of water conservation management practices. This and additional habitat restoration would create a larger area of southern willow scrub of higher quality than that which currently exists.

East and West Lake Islands (Habitat Project No.11 in Section 3.3 of the HWP):³¹ There is currently no southern willow scrub habitat in the area proposed for the lakes or their islands. A small inaccessible island of 0.3 acre of southern willow scrub in each lake would provide protected habitat for wildlife.

Water Conservation Pool (Habitat Project No.13 in Section 3.3 of the HWP):³² This project proposes a phased operation that would permit the areas elevated above the floodplain (elevation 1,040 feet msl) and the perimeter of the water conservation pool (elevation 1,040 to 1,030 feet msl) to become established with southern willow scrub habitat. The Water Conservation Pool project would add 4.5 acres of southern willow scrub in this zone for a new total of 5.7 acres of southern willow scrub. These 5.7 acres represent a wide band around the perimeter of the pool that, once established, would be quality habitat. The existing southern willow scrub habitat below the 1,040 feet msl elevation and in particular below the 1,030 feet msl elevation would degenerate and begin to die as soon as water conservation practices are implemented and this zone is periodically inundated during the winter season. The next phase of the project would remove the 17.8 acres of existing southern willow scrub areas (below elevation 1,030 feet msl) in a coordinated sediment and debris removal operation once the new willow habitat has become established.

³¹ Ibid.

³² Ibid.

Storm Drain Improvements-JPL:³³ A total of 2.0 acres of southern willow scrub would be established at the drainage outfalls along the JPL border just north of the westside parking lot. Exotic species and debris would be removed. These particular drainage outfalls drain through existing sage scrub and some willows. Due to wet conditions caused by urban runoff, the existing 2-acre area would be transitioned from a degraded sage scrub plant community to a higher quality southern willow scrub plant community.

Sage Scrub. There are currently 39.9 acres of sage scrub in the park of which 35.8 acres of habitat would be restored. An additional 6.8 acres of habitat would be established for new total of 42.6 acres of sage scrub habitat. Table 2.3.1.18.2-4, *Sage Scrub*, lists the areas that would be proposed for habitat establishment and restoration of sage scrub.

**TABLE 2.3.1.18.2-4
SAGE SCRUB**

Project	Existing Acres	Proposed Acres
Stream Corridor Alignment (Project 1) ³⁴	1.7	1.7
West Spreading Basins (Project 2&3a) ³⁵	0.0	3.0
East Spreading Basins (Project 3c) ³⁶	4.9	6.0
Stream Channel Widening (Project 4) ³⁷	0.0	2.5
Sunrise Overlook (Project 9)	1.9	1.0
Dam Area ~ Spillway Observation -0.2 and Adjacent Spillway +0.2	13.2	13.2
East Side Park ~ (Oak Woodland -0.5) ³⁸	11.2	10.2

³³ Ibid.

³⁴ Ibid.

³⁵ Ibid.

³⁶ Ibid.

³⁷ Ibid.

(Realign Parking Access Road -0.3) ³⁹ (East Rim Trail Extension -0.2) ⁴⁰		
Storm Drain Improvements ~ JPL ⁴¹	7.0	5.0
TOTAL	39.9	42.6

Stream Corridor Alignment (Habitat Project No.1 in Section 3.3 of the HWP):⁴² The size of the existing habitat area will remain unchanged and habitat restoration would be undertaken within the project area.

West Spreading Basins (Habitat Project No.3a in Section 3.3 of the HWP):⁴³ There is currently no sage scrub habitat in the area of the proposed West Spreading Basins. This existing area is mostly a ruderal plant community. A total of 3.0 new acres of sage scrub would be established along the slope east of the spreading basins. The creation of the westside spreading basins would utilize "Landform Grading" principles to improve habitat for this and other plant communities.

East Spreading Basins (Habitat Project No.3c in Section 3.3 of the HWP):⁴⁴ The existing 4.9 acres of sage scrub, at the East Spreading Basin, would be increased by 1.1 acres to a total of 6.0 acres. The equestrian trail on the west side of the existing spreading basins traverses some of the best old alluvial fan sage scrub in the area. Project 3c involves spreading basins 5 through 10 on the east side. The existing equestrian trail would be abandoned and relocated to the spreading basins maintenance road (asphalt

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Ibid.

⁴³ Ibid.

⁴⁴ Ibid.

to be removed). The area occupied by the existing trail would be restored with sage scrub. The embankment of the new ponds would be planted with sage scrub species.

Stream Channel Widening (Habitat Project No.4 in Section 3.3 of the HWP):⁴⁵ There is currently no sage scrub habitat at this location of the stream channel. On the western slope of the stream channel project, 2.5 acres of sage scrub habitat would be established. The stream on its western edge would be widened for a new total stream channel width of approximately 200 feet. Both the east and west sides of the stream channel would be restored with sage scrub habitat.

Sunrise Overlook (Habitat Project No.9 in Section 3.3 of the HWP): There are currently 1.9 acres of sage scrub habitat in this project area, much of which was established by hydro-seeding when the freeway access ramp was eliminated from this location. A total of 0.9 acre of this habitat would be converted to oak woodland habitat leaving 1 acre of sage scrub.

Dam Area: This habitat project area currently has 13.2 acres of sage scrub. Although the acreage of habitat would remain the same, 0.2 acre of this habitat would be removed as a result of the spillway observation overlook project, but 0.2 acre would also be added as a result of habitat establishment on the slope adjacent to the dam spillway. The existing 12.8 acres remaining would receive habitat restoration.

Eastside Park: A total of 11.2 acres of sage scrub make up the eastside park area. A total of 1 acre of sage scrub would be eliminated due to the following projects: a) 0.5 acre would be converted to oak woodland east of the eastside lake and playfield; b) 0.3 acre would be lost due to the realignment of the eastside parking/access road project; and c) 0.2 acre would be lost to the east rim trail extension project. The total remaining area in sage scrub within the Eastside Park would be 10.2 acres of restored habitat.

Storm Drain Improvements-JPL: A total of 7.0 acres of sage scrub exist adjacent to JPL in the vicinity of the westside storm drains. A total of 2.0 acres of sage scrub would be

⁴⁵ Ibid.

converted to southern willow scrub at the drainage outfalls just north of the westside parking lot (Habitat Project No. 2 in Section 3.3 of the HWPMP)⁴⁶ along the JPL border where exotic species need to be removed, debris collected and disposed of. These particular drainage outfalls drain through existing sage scrub and some willows. Due to wet conditions caused by urban runoff, this 0.2 acre area would be established with southern willow scrub. A total of 5.0 acres would remain in this area in sage scrub.

Riversidean Alluvial Fan Sage Scrub. There are currently 17.2 acres of riversidian alluvial fan sage scrub in the park. An additional 1.6 acres of habitat would be established for a new total of 18.8 acres of riversidian alluvial fan sage scrub habitat. Habitat Project No.2 as described in Section 3.3 of the HWP encompasses the habitat enhancement and restoration for this plant community. A number of smaller habitat restoration projects would be accomplished within a larger area: a) the Stream Channel Widening Project (Habitat Project No.4 as described in Section 3.3 of the HWP) would add 1 acre of habitat; b) the Westside Spreading Basins Project (Habitat Project No.3a as described in Section 3.3 of the HWP) would eliminate ruderal weedy species and add 0.2 acre of habitat to the embankments of the spreading basins; c) the old east to west stream crossing has been abandoned and the asphalt roadway would be removed, adding 0.2 acre of habitat; and d) exotic species and debris would be removed from the various drain outfalls along the JPL border, to accommodate 0.2 acre of riversidian alluvial fan sage scrub.

Mule Fat Scrub. There are currently 19.5 acres of mule fat scrub in the park, of which 10.3 acres would receive habitat restoration. When water conservation measures are implemented, the remaining 9.2 acres of existing habitat would begin to die as the area is frequently inundated. An additional 0.7 acre of habitat would be established along with the 10.3 acres of habitat to be restored. Table 2.3.1.18.2-5, *Mule Fat Scrub* lists the areas that would be proposed for habitat establishment and restoration of mule fat scrub:

TABLE 2.3.1.18.2-5 MULE FAT SCRUB

⁴⁶ Ibid.

Project	Existing Acres	Proposed Acres
Stream Corridor Alignment (Project 1) ⁴⁷	0.9	1.1
West Spreading Basins (Project 3a) ⁴⁸ and Stream Channel Widening (Project 4) ⁴⁹	6.7	5.0
Relocated Disc Golf (Project 8)	0.0	3.7
West Lake (Project 11) ⁵⁰	1.5	0.0
Water Conservation Pool (Project 13)	1.2	1.2
Habitat Lost Due to Inundation	9.2	
TOTAL	19.5	11.0

Stream Corridor Alignment (Habitat Project No.1 as described in Section 3.3 of the HWP):⁵¹ The existing 0.9 acre of mule fat scrub habitat would be increased by 0.2 acre for a total of 1.1 acres in mule fat scrub. The Altadena drain would be shortened to the stream corridor to be realigned, thus allowing for a more natural stream flow.

West Spreading Basins (Habitat Project No.3a as described in Section 3.3 of the HWP) and Stream Channel Widening (Habitat Project No.4 as described in Section 3.3 of the HWP): There are currently 6.7 acres of mule fat scrub habitat within these two project areas. A total of 1.7 acres of this plant community would be removed along the upper banks of the stream and in the vicinity of the new spreading basins. The creation of the westside spreading basins would utilize “Landform Grading” principles to improve habitat for this and other plant communities. This project would widen the stream on its western edge for a new total stream channel width of approximately 200 feet.

Relocate Disc Golf (Habitat Project No.8 as described in Section 3.3 of the HWP): There is currently no mule fat scrub habitat at this location. A total of 3.7 new acres of mule

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ Ibid.

fat scrub would be established in conjunction with the disc golf relocation project. The elevation of the area that has small pockets of existing willow scrub habitat would be elevated to create drainage courses. Raised terraces of mule fat scrub habitat, a very resilient plant community, would serve as the fairways. The areas of existing willows would be linked to create drainage courses that would receive less fill than the terraced areas of this project.

West Lake (Habitat Project No.11 as described in Section 3.3 of the HWP): A total of 1.5 acres of low quality mule fat present on the site would be removed as a result of excavating the lake. The site is a predominantly ruderal and highly disturbed habitat due to past mining operations. Removal of broken concrete that was dumped from previous construction projects would be undertaken. Until this project is implemented the site would be flooded and when water is pumped back or allowed to pass through the dam, the flooded mule fat would die and a pool of water would remain for some time.

Water Conservation Pool (Habitat Project No.13 as described in Section 3.3 of the HWP): When water conservation measures are implemented, existing 4.2 acres of mule fat scrub would die as the area is frequently inundated. This project proposes a phased operation that would permit the areas elevated above the floodplain (elevation 1,040 feet msl) and the perimeter of the water conservation pool (elevation 1,040 to 1,030 feet msl) to become established with mule fat scrub and southern willow scrub habitat. The Water Conservation Pool project would not alter the existing 1.2 acres of mule fat scrub in this zone. The next phase of the project would remove the dying 9.2 acres of existing mule fat scrub areas (below elevation 1,030 feet msl) in a coordinated sediment and debris removal operation.

Southern Sycamore Riparian Woodland. There are currently 2.6 acres of Southern Sycamore Riparian Woodland habitat in the park. An additional 18.6 acres would be established for a new total of 21.2 acres of Southern Sycamore Riparian Woodland habitat. Habitat Project No.12 as described in Section 3.3 of the HWP reflects the restoration planned for this plant community, the largest area proposed for restoration of all the plant communities. Table 2.3.1.18.2-6, *Southern Sycamore Riparian Woodland*, lists the areas that would be proposed for habitat establishment and restoration of Southern Sycamore Riparian Woodland.

**TABLE 2.3.1.18.2-6
SOUTHERN SYCAMORE RIPARIAN WOODLAND**

Project	Acres
West Side	2.1
Around proposed Sycamore Field (Project 8)	2.1
Adjacent to proposed West Side Lake (Project 11) ⁵²	1.4
Adjacent to proposed Spreading Basins 13,14 & 15 (Project 3a) ⁵³	2.2
Stream corridor Alignment (Project 1) ⁵⁴	1.4
East Side	
South of and around Johnson Field (Project 12)	3.8
Around proposed sport & play field	2.1
Around East Side Lake (Project 11) ⁵⁵	1.5
Around Spreading Basins 7 - 12 (exist. No. 5 - 10 Project 3c) ⁵⁶	1.1
Around new Spreading Basins 1 & 2 and expanded Spreading Basins 3 - 6 (exist. No. 1 - 4 Project 3b) ⁵⁷	3.0
TOTAL ACRES TO BE ESTABLISHED	18.6

Ruderal. The existing 75.4 acres characterized by ruderal species would be replaced with other plant communities or would be enveloped by the proposed water conservation pool. The ruderal areas within the designated critical habitat for the federally listed endangered southwestern arroyo toad would be graded using Landform Grading principles and restored to eliminate the highly disturbed and unnatural

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ Ibid.

topography and the poor quality habitat. Quality habitat for the arroyo toad and other native flora and fauna would be provided by the reconfigured topography.

Streambed Riparian. There are currently 8.1 acres of streambed riparian habitat in the park. An additional 0.2 acre of habitat would be established for a new total of 8.3 acres of streambed riparian habitat. Table 2.3.1.18.2-7, *Streambed Riparian*, lists the areas that would be proposed for habitat establishment and restoration of streambed riparian.

**TABLE 2.3.1.18.2-7
STREAMBED RIPARIAN**

Project	Existing Acre	Proposed Acre
Two areas inundated (Project 13)	4.9	0
Stream Channel Widening (Project 4) ⁵⁸	2.4	7.4
Stream Corridor (Project 1) ⁵⁹	0.8	0.9
TOTAL	8.1	8.3

Two Areas Inundated (Habitat Project No.13 as described in Section 3.3 of the HMP): There are two areas below the existing 1,030 feet msl elevation that would be frequently inundated when water conservation procedures are implemented. This practice would cause the existing 4.9 acres of streambed riparian habitat in these areas to die. These two areas would be cleared, excavated and graded for the Water Conservation Pool (Habitat Project No.13).

Stream Channel Widening (Habitat Project No.4 as described in Section 3.3 of the HMP):⁶⁰ An additional 5.0 acres of streambed riparian habitat would be established in conjunction with the existing 2.4 acres of this habitat, for a total of 7.4 acres of streambed riparian habitat. The stream would be widened on its western edge for a new total stream channel width of approximately 200 feet. Landform Grading principles would be utilized here to improve the habitat for several native plant communities and to create quality habitat for the federally listed endangered southwestern arroyo toad and as other native fauna.

Stream Corridor Alignment (Habitat Project No.1 as described in Section 3.3 of the HMP):⁶¹ This restoration project would increase the existing 0.8 acre of streambed

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ Ibid.

riparian habitat by 0.1 acre for a total of 0.9 acre in streambed riparian, similar to and as a continuation of the same habitat, immediately north of the JPL bridge. The Altadena drain would be shortened and the stream corridor widened to allow for a more natural stream alignment.

Aquatic and Wetland. The construction of the two new lakes is proposed for the park. Both projects are defined under Habitat Project No.11 as described in Section 3.3 of the HMP.⁶² There would be a 0.3-acre inaccessible island of southern willow scrub in each lake for protection of wildlife. Aquatic habitat with wetland habitat would be created on the perimeter of the new lakes. Table 2.3.1.18.2-8, *Aquatic and Wetland*, summarizes the Aquatic and Wetland communities that would be provided by the proposed plan.

⁶² Ibid.

**TABLE 2.3.1.18.2-8
AQUATIC AND WETLAND**

Project	West Side Lake	East Side Lake	Total
Aquatic	2.7	2.3	5.0
Wetland	1.8	1.0	2.8
Island (included in willow acres)	0.3	0.3	0.6
TOTAL	4.8	3.6	

Water Conservation Pool. The flood basin behind the dam has been filling with sediment. With an existing capacity of 1,424 acre-feet, it is more than the minimum capacity of 1,400 acre-feet. Since 1970, when the dam was declared unsafe to hold water, vegetation has been allowed to grow in the 92 acres that would be flooded now that the dam has been reconstructed. Implementation of the proposed water conservation pool would be expected to increase the frequency of inundation in areas where vegetation has established in the existing debris pool. A major goal of the proposed project is to create quality habitat wherever possible within this highly disturbed Hahamongna basin. To create new quality habitat above the spillway elevation and increase the capacity of the basin to a maximum of 1,900 acre-feet and to allow for 500 acre-feet of inflowing sediment capacity, this project would move 378 acre-feet of material on site and remove 243 acre-feet of material off site. This would reduce the area frequently inundated to 69 acres and create 28 acres of new recreational and habitat area. This would also create a flood management pool to better control inflowing sediment and floating debris as well as a water conservation pool to allow the retention of flood water for pumping back to the spreading basins. Table 2.3.1.18.2-9, *Water Conservation Pool*, lists the acres of habitat lost due to infrequent inundation and the area of water conservation pool of no habitat.

**TABLE 2.3.1.18.2-9
WATER CONSERVATION POOL**

Project	Acres
Area of Flood Management Pool after increasing capacity (at elevation 1,040.5)	69.0

Habitat lost due to infrequent inundation:	
Willow habitat (elevation 1,030 to 1,040.5)	5.7
Streambed Riparian (elevation 1,025 to 1,040.5)	7.4
Riversidian Alluvial Fan Sage Scrub (area below 1,040.5 elevation)	1.0
Southern Sycamore Riparian Woodland (inundated Flint Wash)	0.5
Total (acres frequently inundated)	14.6
Area of Water Conservation Pool (no habitat)	54.4

2.3.1.19 Utilities

2.3.1.19.1 Eastside Overhead Power and Communication Lines

This project element would underground 3,000 linear feet of existing Pasadena overhead power and communication lines that run north and south on the east side of the park. The project would occur in two phases; the first phase would be to underground these overhead distribution lines from the VOC WTP to the Arroyo Well. The second would be to underground overhead distribution lines from the VOC WTP to Johnson Field.

2.3.1.19.2 Southern California Edison Power Line in the Hahamongna Basin

This project element would relocate the approximately 2,100-linear-foot overhead transmission line that runs diagonally across the basin to an alignment that runs south to Ventura Street along the existing Gabrielino trail from the existing SCE power distribution line along Altadena Drive.

2.3.1.19.3 Pasadena Power and Communication Line in the Hahamongna Basin

The existing Pasadena power and communication line, that traverses the basin from the VOC WTP to the MWD property and northern portions of the west side of the park, would be relocated. Due to the undesirable aesthetics of these poles, the erosion of the pole bases and the inaccessibility for maintenance in the newly designated critical habitat area, the communication portion of this line would be relocated to a new line that would run to JPL from the Windsor-Ventura intersection north along the Gabrielino trail.

The power portion of this line would be relocated from the Pasadena grid that crosses the Devil's Gate Dam to feed facilities in the west side portion of the park. This alignment would go from the dam to Foothill Boulevard (preferably underground) and provide a new feed to OGMO, the Equestrian Staging Area restroom, the new restroom near the Oak Grove Field, the group picnic shelters south of the Oak Grove Field, the park ranger station, the existing restroom in the overnight area, the group picnic

shelters in the overnight camping area, and the new restroom at the Sycamore Grove Field.

2.3.1.19.4 SCE North/South Transmission and South Distribution Line

These lines currently follow the toe of the western slope of the park, run the length of the basin from south to north and feed into and from JPL's main substation. Eleven of 21 power poles are frequently inundated during heavy storm events, making it impossible to access these poles. The poles would either be relocated to an alignment in Oak Grove Drive or be raised to an appropriate height in their current location after the westside perimeter trail, relocated disc golf and improved parking lot areas are constructed with fill to raise the area above the seasonally inundated elevation of 1,040.5 feet (spillway elevation). Relocation of the poles to Oak Grove drive is the preferred solution. Relocation of the lines would be ratified in a mutual agreement between SCE and the City of Pasadena (and potentially other entities such as JPL, MWD, and the city of La Cañada-Flintridge).

2.3.1.20 Accessibility and Safety-Perimeter Park Fencing and Gates

Two types of security fencing would be used. Decorative fencing consisting of some type of iron fencing with or without the use of Arroyo stone (as pillars or as a low wall atop which an iron fence could be placed) would be used where appropriate. Chain-link fencing would be used in areas where security fencing is needed but aesthetics are not an issue. Decorative security fencing would be recommended at three primary locations:

?? At the south end of the park, from the west side of Flint Wash, north to the Gould Canyon Trail at Foothill Blvd.

?? At the Windsor-Ventura entrance between Mountain View and Ventura, along the west side of Windsor.

?? At the end of Altadena Drive.

Gates would be provided at the westside tunnel entrance under Oak Grove Drive, to prevent entry onto the dam from the new parking lot at Oak Grove Drive and Linda Vista during park closure.

Chain-link security fencing would be provided at the end of La Cañada Verdugo Road and Oak Grove Drive from the Woodbury on-ramp to Flint Wash.

2.3.2 ARROYO SECO MASTER PLAN: CENTRAL ARROYO SECO

The Central Arroyo has traditionally been the premier regional recreation area for the City of Pasadena, attracting visitors from all over the Los Angeles basin, and tourists from around the world. At the same time, the Central Arroyo functions as a neighborhood park with homes lining the edges. Given the existing level of development within the Central Arroyo Seco, the Central Arroyo Master Plan would, in part, provide guidelines for the coordination of operations and maintenance activities to maximize accessibility of resources for City residents and visitors. The Central Arroyo Master Plan provides for improvements to existing facilities and provides for the addition of new facilities for passive and active recreation (Figure 2.3.2-1, *Central Arroyo Seco Master Plan*).

2.3.2.1 Create a Ceremonial Main Entry

A ceremonial entry and front plaza that reflects the prestige of the Rose Bowl would provide a pleasurable and informative experience for visitors and tourists. The design integrates the operational requirements of buses and passenger vehicles as well as the aesthetic and informational needs of spectators. It would start at Seco Street and lead to the main Rose Bowl entrance.

2.3.2.2 Parking

This component addresses landscaping improvements to eight existing asphalt-paved and one turf-covered parking areas.

2.3.2.2.1 Landscape Asphalt Lots B, D, F, G, I, K, L, and M

The existing landscaping in asphalt-paved parking areas B, D, F, G, I, J, K, L, and M would be improved to provide shade and enhance the aesthetic experience of visitors.

2.3.2.2.2 Turf Improvements to Lots H, G, and K

The multipurpose turf areas in lots H, G, and K would be improved and increased as proven turf technology becomes available.

2.3.2.3 *Unreserved Picnic Area*

This component is intended to enhance opportunities for passive recreation use within the community.

2.3.2.3.1 Develop Children's Play Area

A new, visible, and inviting children's play area would be constructed adjacent to the unreserved picnic area. The new play area would be 3,000 square feet and comply with all Americans with Disabilities Act (ADA) standards, including the provision for ADA access to the play area and equipment that would employ a permeable surface such as fiber shavings, decomposed granite, or wooden planks. A joint City/Community-based process for design and construction of the play area would be considered. Reserved parking for the proposed unreserved picnic area on the southern edge of Lot I would be available on a continuous basis except during Rose Bowl displacement events.

2.3.2.3.2 Replace Picnic Shelters and Provide Improved Picnic Amenities

An unreserved picnic area would be designated at the existing southern picnic area located at the end of Parking Lot I. Large-group picnic shelters would be replaced with four or five small-group picnic shelters, maintaining the existing capacity of the picnic area. Additional amenities include new barbecues and picnic tables.

2.3.2.3.3 Resurface Existing Pathways from Holly Street Bridge to Lot I

The existing social pedestrian path that connects Lot I to the Holly Street Bridge would be resurfaced. The existing pedestrian pathway is approximately 1,125 feet in length. The pedestrian pathway would be improved to a minimum width of 4 feet. The effort would consist of as many as 85 cubic yards of grading, requiring as many as 5 truck loads.

2.3.2.4 Hillside Improvements

This component is intended to enhance passive and active recreations in the hillside area immediately adjacent to Brookside Park. Many of the historic features on the slopes of Brookside Park that give the Central Arroyo its distinct character have fallen in disrepair. This unique, wooded environment offers a cool retreat from the summer sun and the recreational activities on the turf areas.

2.3.2.4.1 Restore Entries, Pathways, and Arroyo Stone Walls

The pathways and arroyo stonewalls on the hillsides would be restored. This effort would consist of approximately 100 cubic yards of repair, necessitating approximately 7 truckloads. The trails and main pathway would be maintained in their natural surface and existing grades. Pedestrian access from the southeast would be improved by reopening the closed entries leading from Arroyo Terrace. All restorations would adhere to the *Secretary of Interior Guidelines*⁶³, as well as Arroyo Seco Design Guidelines.

2.3.2.4.2 Widen Central Path for Easier Patrol Access

The existing, unimproved pedestrian pathway, which connects Arroyo Terrace and the Aquatic Center would be improved and widened to facilitate safety patrols and pedestrian access. This system of pedestrian pathways is approximately 2,875 feet in length. The proposed improvements would require a maximum of 215 cubic yards of grading, necessitating as many as 13 truckloads.

⁶³ Kay D. Weeks and Anne E. Grimmer, 1995. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with guidelines for Rehabilitating and Reconstructing Historic Buildings*. Washington, D.C.: U.S. Department of the Interior, National Park Service. Cultural Resource Stewardship and Partnerships. Heritage Preservation Series.

2.3.2.4.3 *Restore Amphitheater*

The amphitheater area would be restored by removing overgrown vegetation and by repairing existing damage. The restoration would be accomplished consistent with the *Secretary of Interior Guidelines*⁶⁴. This effort would require less than 40 cubic yards of repair, using four to five truckloads.

2.3.2.5 *Group Picnic / Active Recreation Area*

This component is intended to restore and rehabilitate existing recreation facilities of potential historic significance and allow for management of these facilities. The group picnic areas, the restored amphitheater, the band shell behind the Aquatic Center, and the Brookside Sports Fields would be available on a reservation basis. The Arbor, the Stone Barbecue Area, and the Rockery would be restored according to the *Guidelines of the Secretary of Interior*⁶⁵, and would maintain current capacity. Handrails and/or ramps would be installed in the first level of the Rockery to provide ADA-compliant accessibility. The total volume of grading anticipated to be required in support of the restoration and rehabilitation of these facilities would comprise approximately 83 cubic yards, using six truckloads.

2.3.2.5.1 *Restore Rockery, Arbor, Bandstand and Stone Barbecue*

Overgrown vegetation would be removed from the band shell and the seating would be repaired. The trails to the band shell would be made ADA accessible by providing handrails and/or ramps. Material for 2,500-square-foot band area would be brought in for repairs and improvements to the band shell and stage. The materials for improvement of the band area include decomposed granite and trees to be planted to create shade in the seating area. The materials to repair the stage area would include lumber, electrical devices and an entire bandshell made from iron trellis. The existing asphalt would be removed and the surface would be reduced with soil cement decomposed granite to give it a more rustic appearance.

⁶⁴ Ibid.

⁶⁵ Ibid.

2.3.2.5.2 *Remove Obsolete Elements and Play Equipment*

The developed recreation areas on the east side of the Central Arroyo between Seco Street and West Holly Street contain appurtenant facilities such as barbecues, swings and trash receptacles that do not meet current industry standards. These obsolete facilities would be removed and/or replaced as necessary to attain current standards for recreation, safety, and accessibility.

2.3.2.5.3 *Construct New Children's Play Area*

A new, 8,000-square-foot children's play area would be constructed near the park entrance from lot I. The new children's play area would replace the children's play structure being removed at the main entrance of Brookside Park. The new children's play area would incorporate ADA compliant accessible play equipment. The improvement would include an ADA access to the equipment, consisting of a path composed of fiber shavings, wooden plank, or decomposed granite. The ADA access path to the play area from the Fannie Morrison Building would be constructed with a permeable surface. As recommended by *Trails of the Twenty-first Century*⁶⁶, the pathway would be at least 5 feet wide and have rest areas every 200 to 300 feet. A joint City/Community-based process for design and construction of the play area would be considered.

2.3.2.5.4 *Improve Restrooms and Picnic Amenities*

Pedestal barbecues located throughout the park would be replaced. All picnic tables and barbecues in the existing developed recreation areas on the east side of the Central Arroyo between Seco Street and West Holly Street would be upgraded to meet current standards for accessibility pursuant to ADA. ADA-accessible pathways would be constructed in each area containing picnic tables and barbecues. These accessible pathways would be constructed with permeable surfaces comprised of decomposed granite and/or wood planks. The appurtenant restrooms would be renovated to meet current standards for accessibility pursuant to ADA.

⁶⁶Karen Lee Ryan [ed.], 1993. *Trails for the Twenty-First Century*. Covelo, CA: Island Press.

2.3.2.5.5 Provide Soccer Overlay by Relocating Field Lights

Existing Baseball Diamond No. 2, located within the developed recreation area on the east side of the Central Arroyo between Seco Street and West Holly Street, would be reoriented to accommodate a soccer overlay field. Diamond No. 2 would be rotated approximately 180° so that the outfield is parallel to the outfield in the baseball diamond located adjacent and to the south. This would allow the existing sports field area to accommodate two baseball fields and a soccer field. Light poles/fixtures would be relocated. All fields would be adult regulation fields. The circular stone structure and play structure near the existing park entrance would be removed to maximize the size of the fields and open space. The existing play structure would be replaced with a new play structure near the park entrance from Lot I (described in Section 2.3.2.5.3).

2.3.2.5.6 Replace Colonnade Patio at Aquatics Center with Usable Open Space

The area between the tennis courts and the Aquatic Center would be improved to provide better access and usable open space by removing the colonnade and replacing it with 4,500 square feet of turf.

2.3.2.6 Three-Mile Recreation Loop

From early morning to evening, the four streets that bound the Brookside Golf Course and the Rose Bowl operate as a three-mile recreation loop for bicyclists, strollers, walkers, joggers, and roller bladers, as well as the main vehicular circulation pattern around the Central Arroyo. Conflicts have been known to arise between the recreational users and traffic, and among walkers, in-line skaters, and bicyclists traveling at different speeds. Additionally, local vehicular traffic passes through the park as a shortcut, causing speeding concerns. Entrances and circulation through the stadium parking areas are confusing and poorly marked.

2.3.2.6.1 Pedestrian Lane with Buffer

The three-mile recreation loop would be enhanced by providing a safe, separate, dedicated pedestrian lane. Measurements meet the standards recommended by *Trails*

for the *Twenty-first Century*⁶⁷: a 14-foot wide pedestrian lane, a 4-foot wide textured stone buffer, a 14 to 22-foot-wide lane-shared by cyclists and vehicles, and a 14-foot wide opposing vehicular traffic lane. The measurements on Washington Boulevard would be proportionally smaller. The dedicated pedestrian lane would be widened to 14 feet. The added width would provide ample distances for walkers, runners, in-line skaters, strollers and children on bikes (included in the right-of-way widening above). The pedestrian lane would be separated from vehicular traffic with a 4-foot-wide stone buffer comprised of Arroyo Stone, textured concrete, or stones. The total area of the buffer would be 65,000 square feet. The buffer would act as a warning strip for bicycles and automobiles. Two-way vehicular traffic would be maintained on Seco Street, West Drive, Washington Boulevard, and Rosemont Avenue. This configuration would maintain necessary lanes for vehicular traffic during major events.

2.3.2.6.2 Consider Loop around the Stadium

A Rose Bowl Stadium Loop Pedestrian Pathway would provide a view of the facility for visitors and tourists, and a pathway for daily park users. The exercise loop around the stadium would provide a shorter alternative to the three-mile recreation loop. This pathway would need to meet the safety and operational concerns of the Rose Bowl and golf course, and be ADA-accessible.

2.3.2.6.3 Reduce Traffic Speed

Three traffic-calming methods would be integrated in to the roadways adjacent to the three-mile recreation loop to enhance recreation safety within Central Arroyo. First, a stop sign would be installed at Salvia Canyon Road that would stop traffic in both directions. Second, steps would be taken to reduce the speed limit within the Central Arroyo from 40 mph to 25 mph. Last, pedestrian safety would be enhanced by establishing crosswalks at the intersection of Rosemont Avenue and Seco Street.

2.3.2.7 Multi-Use Recreation Trails

⁶⁷ Ibid.

The multi-use recreation trail is a pedestrian and equestrian trail, requiring a 10-foot vertical clearance and a 5-foot width to meet the standards of equestrian trails in accordance with *Trails of the Twenty-first Century*⁶⁸. Its composition would be either granular stone or dirt surface depending on equestrian preference and horse health. The following adjustments to the trails would improve the safety and enhance the experience for the equestrian riders and pedestrians.

2.3.2.7.1 Realign Eastside Trail along Edge of Golf Course

A multi-use recreational trail would be constructed along the west side of Rosemont Avenue (along the golf course fence) from the Washington Avenue intersection north to the maintenance road. This portion of the trail is 1,500 feet in length, and its construction would not affect any trees, structures, public rights of way, or involve any cut and fill.

2.3.2.7.2 Provide Safe Eastside Equestrian Crossing

The eastside multi-use recreational trail would be relocated from Washington Avenue to the west side of Rosemont Avenue to allow for a safer crossing at Rosemont and Washington Avenues. This section of the existing trail is located adjacent and to the east side of Rosemont Avenue. This portion of the trail would be 200 feet in length. It would not affect any trees, structures, public rights of way, or involve any cut and fill but may require some leveling.

2.3.2.7.3 Provide Directional and Safety Signs

Signs would be placed along the multi-use recreational trail for directional and safety usage. All signs would adhere to Arroyo Seco Design Guidelines.

2.3.2.7.4 Provide a Defined Path of Travel for Equestrians through the Rose Bowl Parking Areas

⁶⁸ Ibid.

Additional signs would be added to the horse trail that crosses the flood control channel on the north end of the Rose Bowl and continues across the main entry of the Rose Bowl to the staging area near the Brookside Clubhouse. All signs would adhere to *Arroyo Seco Design Guidelines*.

2.3.2.8 Pedestrian Pathways

Pedestrian access to the Central Arroyo would be improved by providing pathways. Pedestrian pathways are recommended to be 5 feet wide with a 7-foot vertical clearance in accordance with the recommendations of *Trails of the Twenty-first Century*⁶⁹. Pedestrian enhancements have been recommended along the following roads.

2.3.2.8.1 Salvia Canyon Road

A pedestrian pathway would be located on Salvia Canyon Road between Linda Vista Avenue and West Drive. The trail would be 3,000 feet in length. The proposed enhancements would require a maximum of 277 cubic yards of grading, necessitating up to 17 truckloads.

2.3.2.8.2 Rosemont Avenue

A pedestrian pathway would be located on Rosemont Avenue (western edge) to the eastside hiking and equestrian trail. The trail would be 100 feet in length. The proposed improvements would require a maximum of nine cubic yards of grading, necessitating up to one truckload.

2.3.2.8.3 Seco Street from Linda Vista Avenue to West Drive

A pedestrian pathway would be located on Seco Street from Linda Vista Avenue to West Drive. The trail would be 2,000 feet in length. The proposed improvements would require a maximum of 185 cubic yards of grading, necessitating up to 12 truckloads.

⁶⁹ Ibid.

2.3.2.8.4 Park View Avenue

A pedestrian pathway would be located on Park View Avenue to Washington Boulevard. The trail would be 800 feet in length. The proposed improvements would require a maximum of 74 cubic yards of grading, necessitating up to five truckloads.

2.3.2.8.5 Seco Street from Lincoln Boulevard to Rosemont Avenue

A pedestrian pathway would be located on Seco Street from Lincoln Boulevard to Rosemont Avenue. The pathway would be 1,100 feet in length. The proposed improvements would require a maximum of 102 cubic yards of grading, necessitating up to six truckloads.

Pedestrian access from the south would be improved by resurfacing the existing pathway from the Holly Street Bridge to Lot I.

2.3.2.9 Landscape and Aesthetics Improvements

The Central Arroyo is defined by canyon walls located west and east of the historic flood plain of the Arroyo Seco. These canyon walls are characterized by native vegetation interspersed with ornamental plants. The experience of city residents and visitors would be enhanced through landscape and aesthetic improvements.

2.3.2.9.1 Identify Native Plant Restoration Areas

This component identifies approximately 85 acres of slopes with native vegetation located along the eastern and western boundaries of the Central Arroyo and access routes to the Central Arroyo that would be treated with native plant restoration. The existing vegetation is dominated by coast live oak woodland and sage scrub. Restoration would be accomplished through removal of existing non-native vegetation outside the breeding season for most local native bird species (August 15 to February 15). Plants suitable for restoration would be selected from native plants that are currently known to occur within the Arroyo Seco.

2.3.2.9.2 Tree Planting

As many as 100 trees would be planted in association with the Native Plant Restoration Areas. Three plantings would emphasize the use of coastal live oak and three other species native to the Arroyo Seco, where appropriate.

2.3.2.9.3 Improve and Minimize Signage

Signs in this area would be improved to facilitate visitor safety and visitor orientation. It would be made as unobtrusive as possible. In addition, all signs would comply with the *Arroyo Seco Design Guidelines*.

2.3.2.10 Accessibility and Security

All new facilities would meet ADA standards. Existing Central Arroyo facilities would be reviewed for compliance with ADA standards. Existing drinking fountains would be replaced with ADA-accessible drinking fountains. ADA-accessible viewing would be provided behind home base at Jackie Robinson Stadium. Additional ADA-accessible passenger car and van parking spaces would be provided in Lot I insuring no net loss in non-ADA-accessible spaces by re-stripping the parking lot.

2.3.3 ARROYO SECO MASTER PLAN: ROSE BOWL USE PLAN

2.3.3.1 Rose Bowl Adjustments

The Rose Bowl Operating Company (RBOC) has recommended that the City Council approve a Rose Bowl Use Plan that would allow 25 major events, or displacement events, to be permitted annually. The definition of a major event would be an event that has a minimum of 20,000 attendees. The draft Use Plan has been presented to the Central Arroyo Master Plan Advisory Committee, the chamber of Commerce Board of Directors, and the Pasadena Center Operating Company. Two of the most important issues that the RBOC addressed as part of the Use Plan are fiscal responsibilities and the Arroyo Seco Ordinance, which would include the number of major events permitted at the Rose Bowl⁷⁰.

When determining a recommendation for the future use of the Rose Bowl, staff members considered these important factors:

- ?? Current stadium bond debt including principal and interest is 45 million dollars;
- ?? Renowned 1922 stadium must remain competitive and provide ongoing resources to support capital improvements;
- ?? Demand for a stadium the size of the Rose Bowl is limited;
- ?? Rose Bowl is the only major national stadium that the committee is aware of that has a limitation on the number of annual events permitted.

Additionally, the City Council has directed that Area H be accessible for recreational use whenever feasible⁷¹.

2.3.3.1.1 Major Events

⁷⁰ City of Pasadena. 2000. *Agenda Report to the City Council: Rose Bowl Use Plan from Rose Bowl Operating Company*, August 14, 2000.

⁷¹ Ibid.

With the exception of 1994, there have been no more than 14 major events in a given year. In 1994, the number of major events held in the Rose Bowl rose to 20 due to eight World Cup matches and four concerts. Factors that would significantly increase activity at the Rose Bowl, given its size, are the increase in the popularity of soccer as a spectator sport in the United States, an increase in concert activity at stadiums, and the potential that a college or National Football League team desires to use the Rose Bowl as a home stadium. This would therefore require an increase in the number of major events permitted to be held.

2.3.4 ARROYO SECO MASTER PLAN: LOWER ARROYO

The Central Arroyo Master plan element of the Arroyo Seco Master Plan is organized into eighteen use areas (Figure 2.3.4-1, *Lower Arroyo Seco Conceptual Mater Plan*):

- Improve the Grounds of La Casita del Arroyo
- Enhance Main Park Entrance
- New South Entrance
- Improve Casting Pond Area
- Enhance Bird Sanctuary
- Northern Archery Range
- Southern Archery Range
- Roving Archer's Clubhouse
- Bridge Crossing at Archer's Clubhouse
- Improve Westside Multi-Use Trail Access at Parker-Mayberry Bridge
- Westside Multi-Use Trail for Bicyclists and Hikers
- Eastside Multi-Use Trail for Bicyclists and Hikers
- Camel's Hump Loop Trail
- Install New Pedestrian Bridge
- Westside Pedestrian Bridge
- Restore Arroyo Boulevard Rim Trail
- Restore Neighborhood Trail access
- Memorial Grove Restoration

2.3.4.1 *Improve the Grounds of La Casita Del Arroyo*

2.3.4.1.1 *Restore Arroyo Stone Walls and Stairs*

Restoration of the arroyo stonewalls on the project site would be undertaken in accordance with the *Secretary of the Interior's Guidelines*⁷² for restoring historic

⁷² Weeks and Grimmer, 1995.

structures. Restoration of the garden steps at the southern rear corner of the site would be undertaken in accordance with the Secretary of the Interior's guidelines for restoring historic structures.

2.3.4.1.2 Enhance Public Trail Connections

Trail connections to La Casita and its immediate area would be enhanced.

2.3.4.1.3 Provide Interpretative Information and Kiosk

An information kiosk with interpretive information would be installed. Landscaping and brush removal would occur in the sloped area south of La Casita and in the area leading to the low flow stream area.

2.3.4.1.4 Improve Directional Signage

Directional signs would be provided.

2.3.4.2 Enhance Main Park Entrance

This project element would upgrade the existing entrance located near the intersection of Arroyo Boulevard and Norwood.

2.3.4.2.1 Provide New Gate

The entry driveway would have a new entry gate much like what would be designed for the new southern entrance to the Lower Arroyo; it is anticipated that the gate design would be similar to what exists at La Casita.

2.3.4.2.2 Improve Main Entry Signage

The entry driveway would have new entry signs much like what would be designed for the new southern entrance to the Lower Arroyo.

2.3.4.2.3 Improve Entry Landscape and Lighting

New landscaping with native planting would be included in this project element. Lighting would be incorporated among main entrance features.

2.3.4.2.4 Widen Access Road to Standard Width of 24 Feet

Repairs to the 1,400-linear-foot access road would be undertaken to improve it to a standard width of 24 feet to include vehicles and bicycles. The road would require 0.4 acre of on-site grading, resurfacing, and the installation of a new crib wall to stabilize the eroded slopes on the edge. Repairs would also be undertaken for 800 linear feet of barrier. Brush removal and stabilization would be undertaken for 32,000 square feet of adjacent slope, in addition to 10,000 square feet of native landscaping.

2.3.4.2.5 Improve Directional Signage

Directional signs would be provided as needed on this project element.

2.3.4.3 *New South Entrance*

The new southern entrance would provide entry to the Arroyo Seco from the southern city limits completely within Pasadena city property. The existing informal entrance through the San Pasqual Stables in southern Pasadena would be abandoned, except for equestrian usage. A new driveway entrance with a new gate and lighting along San Pasqual Road would be added and lead to a paved access road along an already existing graded pathway 500 feet in length. The access road would be at least 24 feet wide and signed to accommodate both motorized vehicles and bicycles.

2.3.4.3.1 20 Parking Spaces

The proposed entrance would terminate in a new small parking lot with 20 spaces allocated as follows: 10 standard spaces at 162 square feet each, 1 ADA space at 540 square feet, 1 bus space at 600 square feet, and 8 equestrian trailer spaces at 675 square feet each. The total area of the parking lot would be approximately 1 acre. The parking lot would be cast in a permeable material, much like what exists in the present parking lot near the Casting Pond. Boulders would be placed around the edge of the lot to define its perimeter. The parking lot would also connect to the bicycle and equestrian trails along a 100-foot-long trail that is at least 14 feet wide.

2.3.4.3.2 Restroom and Drinking Fountain

The project element would also include the replacement of the bathroom currently in the Memorial Grove that is planned for demolition. The new facilities would be 1,000 square feet and be serviced by the city's proposed extension of the gravity sewer line in this area. Other amenities planned in this project element would include several drinking fountains.

2.3.4.3.3 Picnic Area

Shady areas under trees where 6 picnic tables would be randomly placed to accommodate hikers, cyclists and equestrians.

2.3.4.3.4 Equestrian Amenities

A designated equestrian path/use area with hitching posts for horses as well as a watering trough would be provided at least 500 feet upwind of all other public activity facilities, as recommended in *Trails for the Twenty-first Century*⁷³.

2.3.4.3.5 Interpretive Area and Information Kiosk

⁷³ Ryan, 1993.

The area would serve as a southern gateway to Pasadena's Arroyo Seco and an interpretive area would be provided. Interpretive material, maps of the area and regional trails, and general information would be provided at a central kiosk. The kiosk would be located outdoors for easy identification and access by visitors and have adequate weather protection.

2.3.4.3.6 New Entry and Directional Signage

The entry drive would have new entry signage and a well-designed entry gate, much like what would be designed for the existing entrance to the Lower Arroyo; a gate design similar to what exists at La Casita has been mentioned but needs further evaluation. The trail definition program would provide extensive signage in this project element area; signage would be provided to clearly direct people to the local Pasadena trail system and also direct special category users such as cyclists and equestrians to the appropriate connecting trail systems.

2.3.4.3.7 Entry Landscaping and Entry Lighting

The project area in the 18,000 square feet surrounding the building along the access road, driveway entrance, and parking lot would be landscaped in native vegetation. The new driveway entrance lighting, along San Pasqual Road, would be added and lead to a paved access road along an already existing graded pathway 500 feet in length.

2.3.4.3.8 New Gate

The entry drive would have a new well-designed entry gate much like what would be designed for the existing entrance to the Lower Arroyo; gate design would be similar to what exists at La Casita.

2.3.4.4 Improve Casting Pond Area

2.3.4.4.1 Repair Pond and Resurface Deck

The 20,000-square-foot cracked and leaking surface of the Casting Pond would be resurfaced. Eight benches adjacent to the pond would be replaced and the drinking fountain would be modified to allow for a dog trough. The 6,000-square-foot asphalt deck surrounding the pond would be replaced with concrete or a material like soil cement that looks natural but would hold up to weather conditions.

2.3.4.4.2 Repair Drainage System

Repair and modification of the drainage system would be accomplished.

2.3.4.4.3 Stabilize Slope and Clear Brush

The 48,000 square feet of slopes around the Casting Pond would be stabilized, cleared of brush, and landscaped with native vegetation.

2.3.4.4.4 Provide ADA-accessible Trail

A 60-linear-foot pedestrian pathway and bridge over the east fork of the low-flow stream would be installed to allow access from the parking lot to the clubhouse and casting pond. Existing plantings would need to be cleared to build the bridge. The entire area around the pond would be made ADA-accessible including the allocation of 2 ADA fishing stations requiring at least 25 square feet each. This project element would also provide an 830-linear-foot ADA-accessible portion of the Eastside Multi-use Loop Trail between the Casting Pond and La Casita del Arroyo. Three rest stops would be created along this stretch of trail in accordance with ADA standards.

2.3.4.4.5 Improve the Signage

Dogs would be prohibited from using the pond through signage.

2.3.4.5 Enhance Bird Sanctuary

This project element would improve the existing bird sanctuary site.

2.3.4.5.1 Restore Stonework and Fountain

The drinking fountain would be rebuilt to allow for dog access, separate from a system to fill water bottles. Stonework in the seating area and the fountain would be restored in accordance with the Secretary of the Interior's guidelines for restoring historic structures.

2.3.4.5.2 Provide Trail Connection to Memorial Grove

A new 400-linear-foot trail connection would be created from the Bird Sanctuary to the lower Arroyo at the Memorial Grove.

2.3.4.5.3 Provide Lighting for Increased Security

Better lighting would occur, especially in the area of the stairs and lower terrace to increase usage, restore habitat, and to minimize problems with vandals, graffiti, and gang activity

2.3.4.5.4 Provide Curb Cut to Encourage Use as Rest Area

A curb cut would be created along Arroyo Boulevard for a maintenance scooter to access the site and also allow cyclists using Arroyo Boulevard to use it as a rest stop.

2.3.4.5.5 Provide Interpretative Signage

Interpretive signs would be placed at this site as part of a larger interpretive signage system in the Arroyo Seco.

2.3.4.5.6 Enhance Landscaping

Increased plantings would occur, especially in the area of the stairs and lower terrace, to increase usage, restore habitat, and to mitigate problems with vandals, graffiti, and gang activity.

2.3.4.5.7 Improve Directional Signage

New directional signs would be provided as part of the overall trail definition program for the Arroyo. Approximately 800 square feet of slope where storm drain is exposed and major erosion has occurred would be repaired; the city engineering division is proposing a new alignment for this storm drain.

2.3.4.6 Northern Archery Range

2.3.4.6.1 Improve Paths and Trails

Approximately 1,000 linear feet of the range would be improved to a width of 10 feet to be ADA-accessible. Vegetation on the range would be inspected with regularity so as to not create any blind spots for archers or other recreational users on the trail.

2.3.4.6.2 Rebuild Targets and Target Access

The layout of the northern archery range would remain the same. A design standard for target construction as well as access to the 14 targets would be developed and implemented.

2.3.4.6.3 Improve Signage

Archery trails would be defined with improved signage. A signage program utilizing orange safety cones would be implemented to identify archer shooting lanes and to alert other archers that the range is in use.

2.3.4.7 Southern Archery Range

2.3.4.7.1 Improve Paths and Trails

Approximately 2,000 linear feet of archery paths would be improved to a width of 4 feet for ADA accessibility. Two drinking fountains in the area would be upgraded and relocated for better accessibility to a greater number of users and meet ADA standards.

2.3.4.7.2 Rebuild Targets and Target Access

The southern range (south of the Archer's Clubhouse) would consist of all the same elements as the northern range.

2.3.4.7.3 Improve Signage

The southern range (south of the Archer's Clubhouse) would consist of all the same elements as the northern range.

2.3.4.8 Roving Archer's Clubhouse

2.3.4.8.1 Build Restroom and Storage Area

The clubhouse would be expanded to 1,000 square feet with the ADA-accessible restroom facilities taking up 400 square feet and the storage room taking up 600 square feet. The new storage room would replace the storage facilities currently located at the Memorial Grove. Since there is no public sewer service on the west side of the flood control channel, the restroom would be fitted with a small pump that would take sewage across the flood control channel to the Casting Clubhouse sewage lift station in accordance with the Army Corps of Engineers guidelines for building restroom facilities in flood plains. The line across the flood control channel would be jacked underneath the channel to prevent any leakage.

2.3.4.8.2 Provide Interpretative Information and Kiosk

The building would also serve as an information kiosk for park users, including interpretive signage and a map of the area as part of the larger interpretive trail system for the Arroyo Seco. The kiosk would be facing outdoors for easy identification and access by visitors in addition to having adequate weather protection.

2.3.4.8.3 Enhance Landscaping

Approximately 6,000 square feet of land immediately surrounding the clubhouse would be landscaped in native vegetation.

2.3.4.8.4 Provide Picnic Area

Eight picnic tables would be placed at the clubhouse.

2.3.4.8.5 Provide Six Parking Areas

Controlled, event-related parking for up to six cars (including one ADA space) would be provided at the clubhouse.

2.3.4.8.6 Improve Directional Signage

Signs would be placed at key locations in the lower Arroyo Seco to direct and inform park users.

2.3.4.9 Bridge Crossing at Archer's Clubhouse

2.3.4.9.1 New Gate with Passage for Non-Motorized Users

The existing 15-foot bridge that crosses over to the Archer's Clubhouse would be improved with the installation of a new 10-foot swinging gate. The remaining 5-foot gap would allow for hikers, walkers, and cyclists to cross the bridge.

2.3.4.9.2 Improve Directional Signage

Directional signs would be established to prohibit the passage of unauthorized vehicles and equestrians. The bridge would have rails of at least 54 inches in height to accommodate multiple uses.

2.3.4.10 Improve Westside Multi-Use Trail Access at Parker-Mayberry Bridge

The northern end of the existing Westside trail would be improved to allow a small maintenance vehicle, cyclists, and pedestrians' access onto the west side of the existing Parker Mayberry Maintenance Bridge (located beneath the Colorado Street Bridge). Directed use of the maintenance bridge would allow users to cross the arroyo and exit on Arroyo Boulevard (current eastern exit point for bridge).

2.3.4.10.1 Multi-Use Exclusive of Equestrian

This improvement consists of approximately 350 linear feet in length and 18 feet in width for a trail (multi-use exclusive of equestrian), which would meet the standards recommended by *Trails for the Twenty-first Century*⁷⁴. The existing iron gate on the east side of the bridge entry would remain open all the time.

2.3.4.10.2 Install Bollards at Arroyo Boulevard Entry/Exit to Prevent Non-Motorized Use

⁷⁴ Ryan, 1993.

A system of bollards or a modified swing gate would be installed to prevent vehicles from entering while allowing recreational users to pass through this entry with ease; the bollards could be removed or the swing gate opened when official vehicles needed to enter. No grading would be required.

2.3.4.10.3 Improve Directional Signage

Directional signs would be improved to facilitate visitor orientation in accordance with the *Arroyo Seco Design Guidelines*.

2.3.4.11 Westside Multi-Use Trail for Bicyclists and Hikers

2.3.4.11.1 Improve Trail from Southern City Limits to Parker-Mayberry Trail Bridge

Parker-Mayberry Bridge to the new Southern Entry at Arroyo Boulevard - This project element would create a new designated recreational bikeway along the west side of the flood control channel from the Parker-Mayberry Bridge to the new Southern Entry at Arroyo Boulevard. The bikeway would link to existing bicycle routes to the north by way of the improved access at the Parker-Mayberry Bridge and onto the Class III bikeway along Arroyo Boulevard.

Parker-Mayberry Bridge to the Archer's Range - This project element would improve a 1,920 linear foot portion of the Westside Multi-Use Trail between the Parker-Mayberry Bridge and the Archer's Range.

La Loma Bridge to the San Rafael Bridge at Laguna - The existing trail would be improved and its alignment adjusted both to accommodate the new bicycle trail and to create a more desirable landscape. This area traverses some wonderful, wide expanses with as many as 1.5 acres with great potential for habitat restoration.

San Rafael Bridge at Laguna to the south city limits - This project element would do much of the same as the project element described above. It would improve 805 linear

feet of trail to a minimum width of 10 feet (multiple-use exclusive of equestrian) in accordance with the standards recommended by *Trails for the Twenty-First Century*⁷⁵.

2.3.4.11.2 Enhance Trail and Surroundings

This bikeway improvement would be approximately 8,775 feet in length with a minimum width of 10 feet in compliance with the standards recommended by *Trail for the Twenty-First Century*⁷⁶. Where the minimum width of 10 feet cannot be accommodated due to existing obstructions, safety signs would be placed. The trail would follow the alignment of the existing trail with the exception of 800 feet of new trail located between the La Loma Bridge and the new pedestrian bridge (located just north of Camel's Hump). Minimal grading of 11,200 square feet would be required for the new 800-foot segment of trail and would be balanced on-site.

2.3.4.11.3 Resurface with All Weather Material

The bikeway would be surfaced with an all-weather material, separated from other uses where needed through the placement of barriers and/or vegetation fencing, and clearly identified by signage. To avoid conflicts and to increase safety, all equestrian use of the Lower Arroyo Seco would be prohibited on the west side and restricted to the east side of the flood control channel through signage. The project element would make trail repairs, repair erosion problems in steep areas, resurface the trail with compacted Class II base material or decomposed granite and make a 1,800-linear-foot portion of the trail ADA-accessible. The trail would be improved where possible to a minimum width of 10 feet to accommodate a small maintenance vehicle and still allow the passage of recreational users. The trail improvement of this segment consists of approximately 3,250 linear feet that would be improved to a standard width of 10 feet (multi-use exclusive of equestrian) and be surfaced with compacted Class II base material or decomposed granite.

⁷⁵ Ibid.

⁷⁶ Ibid.

2.3.4.11.4 Provide Informal Rest Areas

Boulders would be placed at least 4 feet from the edge of the trail in random locations to create 2 rest stops of 350 square feet each. Boulders and native plantings would be added at various points along the trail's edge to create informal rest stops along the trail.

The trail would be repaired as needed and the edges would be enhanced with boulders and native plantings to create 1 rest stop. Approximately 40,000 square feet would be cleared of brush. The new bicycle path would cross over to the east side of the flood control channel at the existing 12-foot-wide pedestrian bridge just north of the South Pasadena city limits. For bridge bicycle access, the handrails would be at least 54 inches high and 1.5 inches thick according to *Trails for the Twenty-First Century*⁷⁷.

2.3.4.11.5 Provide Picnic Tables

Four picnic tables would also be randomly placed throughout the expanse of the trail. Approximately 62,000 square feet (1.5 acres) of adjacent slopes would undergo heavy brush removal as well as removal of exotic species.

2.3.4.11.6 Improve Trail Signage

Directional trail signs would be added as part of a larger trail definition/signage program for the Arroyo Seco. Signs along the trail would be provided as part of the overall trail definition program. This would be necessary in the narrower reaches of the area, where bicyclists, pedestrians, and other users would be required to share the trail. Additionally, signage and other safety measures (e.g. speed controls for bicyclists) would be necessary. Minimal grading would be required.

⁷⁷ Ibid.

2.3.4.12 *Eastside Multi-Use Trail for Hikers and Equestrians*

2.3.4.12.1 Improve Trail from New South Entry to Parker-Mayberry Bridge

This project element would improve 60 feet of sloped trail beneath the Parker-Mayberry Maintenance Bridge and the Colorado Street Bridge. The area serves as a transition between the Lower Arroyo and the pathway along the unchannelized reach of the Arroyo upstream of the Colorado Street Bridge. The relatively steep slope and unimproved conditions would be modified with grade breaks of large timbers, stone, concrete or other suitable material and surfaced with pathway treatment to create a stepped pathway. The trail (multi-use exclusive of cyclists) would be at least 4 feet wide and have 10 feet in vertical clearance. This project element would improve the existing Eastside Multi-use Loop Trail.

2.3.4.12.2 Resurface with Decomposed Granite

This project element would improve 2,300 linear feet of trail, repairing erosion problems in steep areas, resurfacing the trail with decomposed granite (DG) and making it ADA-accessible where feasible. The trail would be improved to a standard width of 14 feet to accommodate maintenance vehicles and still allow the passage of recreational users (multi-use exclusive of cyclists), especially equestrians, who would be limited to this side of the flood control channel. Minimal material would be needed to fill ruts in the trail.

Approximately 1,100 linear feet of an existing above-ground irrigation system would be salvaged or replaced and flushed with the ground to provide individual bubblers to trees along the trail.

2.3.4.12.3 Provide Rest Areas

Boulders would be added at various points to create 2 informal rest stops. Brush clearing would occur for approximately 92,000 square feet on the slopes that edge the trail, as well as some native landscaping.

2.3.4.12.4 Improve Directional Signage

Directional trail signs would be added as part of a larger trail definition/sign program for the Arroyo Seco.

2.3.4.13 Camel's Hump Loop Trail

2.3.4.13.1 Expand Trail System at Camel's Hump

The habitat, circulation for trail users, circulation for maintenance access and the general appearance of the area would be enhanced. The project element would build on the existing trail system by adding 800 linear feet of new trail to areas recreational users would be able to enjoy and also provide maintenance access to these areas that are currently difficult to reach.

2.3.4.13.2 Study Geological Stability

The stability of the Camel's Hump would be studied, in particular the western face to define best management practices for slope stabilization. Extensive erosion and rockslides have occurred over time at this location. As a key passage route in the Arroyo Seco, a geologic investigation would be needed to determine the safety of continuing to allow a trail under the western face of this formation. The study would make recommendations to address any further deterioration of the slope and assess the existing trail along the western face. Also, a 3-year-old planting project in this area would require renovation.

2.3.4.13.3 Clear Brush and Landscape with Native Plants

A brush-clearing program would provide for improved xeriscape landscaping in the 1,440-square-foot area bordering the Busch Gardens to create a more appealing screen of the wooden fence in Busch Garden's neighborhood.

2.3.4.13.4 Replace Irrigation System

Remnants of the existing irrigation system that covers 65,000 square feet would be salvaged, replaced, and made flush with the ground to provide a system of individual bubblers to trees in the area.

2.3.4.13.5 Habitat Restoration

An additional 65,000 square feet of terrain would undergo habitat restoration.

2.3.4.13.6 Provide Rest Stop Areas

New plantings and the placement of boulders would serve as 2 informal rest stops along the expanse of the trail. The trail would be repaired with compacted Class II base material or decomposed granite.

2.3.4.13.7 Improve Directional Signage

Directional trail signs would be added as part of a larger trail definition/signage program for the Arroyo Seco.

2.3.4.14 Install New Pedestrian Bridge

A new bridge would be installed across the flood control channel to connect the Camel's Hump area with the Westside Multi-use Trail, about halfway between the La Loma Bridge and the San Rafael Bridge at Laguna. The bridge would be approximately 50 linear feet in length and at least 12 feet wide to accommodate pedestrians and hikers. Equestrians and bicyclists would be prohibited from the bridge to maintain separation between the two user groups for safety reasons by the placement of warning signs. An access control mechanism would be installed to control usage. The handrails of the bridge would be at least 42 inches high and 1.5 inches thick. The bridge would be flush with adjoining grade to allow handicap accessibility and to allow a maintenance utility vehicle to cross (maximum load would be 5 tons for standard pickup truck; no emergency rescue vehicles would be allowed). The bridge would be of a material similar to other bridges in the Lower Arroyo Seco, or a prefabricated bridge that would blend with the character of the area.

2.3.4.15 *Westside Pedestrian Trail*

2.3.4.15.1 Separate Southern Archway Range Trail from Westside Multi-Use Trail

The existing 1,600-linear-foot trail on the edge of the Southern Archery Range area would be separated from the Westside Multi-use Trail and would hug the westerly slope.

2.3.4.15.2 Provide Signage for "Range in Use"

This trail would keep the archery activity separated from the other park uses and provide improved safety with the addition of the new bicycle route through signage. Archers would be prohibited from using the Westside Multi-use Trail through signage.

2.3.4.15.3 Landscape to Blend with Surrounding Habitat Restoration Project

The trail would be improved to a width of 4 feet, repaired with compacted Class II base material, and its edge landscaped to blend with the surrounding Browning-Ferris Industries (BFI) habitat restoration project.

2.3.4.16 *Restore Arroyo Boulevard Rim Trail*

2.3.4.16.1 Pedestrians Only

Area residents heavily use this 7,400-linear-foot trail that runs along Arroyo Boulevard from the Parker-Mayberry Trail to Westover. This project element would make repairs to the trail so that access is safe and barrier-free; 3,000 linear feet of the trail would be made ADA-accessible with the addition of 10 curb cuts made at various points along the trail.

Prohibiting the use of equestrians and cyclists would be provided as part of the sign and trail-definition program. No substantial grading would be required

2.3.4.16.2 Restore Arroyo Stone Walls

Areas where sections of arroyo stonewall are damaged along the trail would be repaired in accordance with the *Secretary of the Interior's Guidelines*⁷⁸ for restoring historic structures.

2.3.4.16.3 Enhance Landscaping

Approximately 60,000 square feet of brush clearing and poison oak removal would occur to make the area passable, pleasing to look at, and safe for humans and animals.

2.3.4.16.4 Replace Irrigation

Approximately 5,000 linear feet of exposed irrigation systems create hazardous situations and would therefore be eliminated. Exotic vegetation would also be removed. Areas where washouts have occurred would be repaired.

2.3.4.16.5 Improve Directional Signage

Directional signs would be provided as part of the signage and trail definition program in addition to prohibiting the use of equestrians and cyclists. No substantial grading would be required.

⁷⁸ Weeks and Grimmer, 1995.

2.3.4.17 Restore Neighborhood Trail Access

2.3.4.17.1 Restore Historic Trails

Major access points leading into the Lower Arroyo Seco from the various surrounding neighborhoods would be restored. This project element would be a combination of trail restoration work, rubble wall restoration work, signage definition and planting restoration. All structural restoration would be undertaken according to the *Secretary of the Interior's Guidelines*⁷⁹ for restoring historic structures. A total of 12 access points that would be restored:

- Westminster
- La Casita Trail (through butterfly garden)
- Bird Sanctuary
- California Boulevard
- La Loma
- Bradford Street
- Busch Garden Court
- Rockwood Place Parker-Mayberry Bridge to Westside Trail
- Westbridge Place
- South of Westbridge Place
- San Pasqual (north of San Rafael Avenue)

The trail restoration work would include repair of washed out trails, repair of ruts, and removal of sediment that has washed down over the trails. Grading would be balanced on-site.

2.3.4.17.2 Restore Arroyo Stone Walls

⁷⁹ Ibid.

This project element includes rubble wall restoration work. All structural restoration would be undertaken according to the *Secretary of the Interior's Guidelines*⁸⁰ for restoring historic structures.

2.3.4.17.3 Restore Plantings

The planting restoration part of this project element would clear the trail of all exotic weeds and grasses and any overgrown or dead brush. New planting would occur as needed for slope stabilization or to replace dead trees or for general habitat enhancement or aesthetic purposes.

2.3.4.17.4 Improve Signage

Each access would be signed and provided with a map of where the trail leads in connection to the larger Arroyo system.

⁸⁰ Ibid.

2.3.4.18 Memorial Grove Restoration

This project element proposes extending the existing low-flow stream system in the area, restoring native vegetation, and renaming of the AIDS Memorial Grove to the Memorial Grove. The field has become the location for trees to be planted in memorial of someone. The Parks and Natural Resources Division of the city would specify tree species that can be planted and would supply interested parties with standards for planting, a list of vendors where trees can be purchased, and information about tree care responsibilities. The area has not been well maintained over time.

2.3.4.18.1 Extend Low-Flow Stream System

A low-flow stream system would be introduced to this area as a continuation of the low-flow stream system to the north into the area, and riparian woodland framework would be incorporated into the landscape.

2.3.4.18.2 Create an Open Natural Area

Approximately 60,000 square feet of brush clearance and slope stabilization would occur, and the area would be replanted with a more open canopy to accommodate the memorial theme and to minimize the dependency on regular maintenance.

2.3.4.18.3 Provide Rest Areas

Approximately 1,500 linear feet of trail in this area would be modified to fit the layout of any future streams. Informal rest areas would be created along the trail's edge with occasional boulders placed for walkers to sit on. The bench under "Rainbow Tree" would be preserved and enhanced with improved access. Two picnic tables would also be placed in this area.

2.3.4.18.4 Habitat Restoration

Habitat restoration would be a significant component of this project element.

2.3.4.18.5 Remove Restroom

The city has approved the removal of an existing bathroom and storage room that has been closed for many years due to poor safety, vandalism and illegal activities. The storage area of the bathroom is still in use by the Roving Archers who need the space to store their bales of hay and their equipment. This storage space would be replaced by the new storage room at the Archer's Clubhouse.

A planting project in the area that was implemented approximately 3 years ago is in need of modification. Remnants of the existing irrigation system covering 60,000 square feet would be salvaged or replaced, and made flush with the ground to provide a system of individual bubblers to trees in the area.

2.3.5 ARROYO SECO MASTER PLAN: DESIGN GUIDELINES

The purposes of the *Arroyo Seco Master Plan* Design Guidelines include the following:

- ?? Provide a unifying set of criteria for the site development improvements set forth in the proposed project;
- ?? Provide site development design criteria for ongoing long -range improvements for the Arroyo Seco leading to a unified park design that reflects the heritage of the site and its relationship to the tradition of the City of Pasadena; and
- ?? Provide specific site design solutions that are consistent with the existing Arroyo Seco Ordinance and a vehicle by which practical inputs for ingoing improvements can take place.

The Arroyo Seco Design Guidelines include guidance for the following components:

- ?? Habitat Restoration and Land Improvements,
- ?? Architecture,
- ?? Cultural Resource Preservation,
- ?? Recreation,
- ?? Signage,
- ?? Walls, Fences and Gates,
- ?? Walkways, Paths, and Trails,
- ?? Parking and Traffic Control,
- ?? Public Art, and
- ?? Site Furnishings.

2.4 INTENDED USES OF THE MASTER EIR

The City is the lead agency for the proposed project, pursuant to the California Environmental Quality Act (CEQA) and may utilize this draft *Master EIR* in its decision-making process related to the following actions:

- ?? Approval of Elements of the proposed project
- ?? Conceptual approval of Program Elements of the proposed project
- ?? Approval of the specific plans for the conceptual plans for the proposed project

2.5 RELATED PROJECTS

An area surrounding the proposed project was examined to identify approved or proposed projects that could contribute to impacts created by the proposed project. The proposed project lies within the city limits of the City of Pasadena. The list of related projects research was based on information on file at the City of Pasadena Planning Department, as well as recently accepted traffic impact reports prepared for project within the City of Pasadena. The location of related projects was mapped for consideration in the assessment of cumulative impacts (Figure 2.5-1, *Location of Related Projects*).

A list of related projects and relevant information is presented in Table 2.5-1, *Related Projects*.

**TABLE 2.5-1
RELATED PROJECTS**

Map No.	Address//Location	Land Use	Size Dwelling Units (du) Square Feet (sf)
1	145 Chestnut Street	Apartment	143 du
2	35 South Wilson	Apartment	48 du

Map No.	Address//Location	Land Use	Size Dwelling Units (du) Square Feet (sf)
3	511 South Fair Oaks	Self Storage	57,679 sf
4	324, 327, 285 Madeline Drive Westridge School	School	49,990 sf
5	1005 Armada Drive Chandler School	School Expansion	11,278 sf
6	20 West Green Street	Apartment Office Retail	21 du 13,500 sf 9,500 sf
7	42 West Dayton Street	Residential Retail	18 du 4,635 sf
8	249 Ohio Street	Condominium	11 du
9	280 Marengo Street	Office	31,135 sf
10	457 South Marengo Street	Condominium	22 du
11	380 Seco Street	Warehouse	6,600 sf
12	1475 and 1487 N Los Robles Ave Pasadena Christian School	School	5,117 sf
13	300 East Colorado Boulevard - Paseo Colorado	Mixed Use	715,000 sf
14	210-218 South Madison Avenue	Condominium	19 du
15	581 Marengo Avenue	Condominium	10 du

**TABLE 2.5-1 (CONTINUED)
RELATED PROJECTS**

Map No.	Address//Location	Land Use	Size Dwelling Units (du) Square Feet (sf)
16	129- 155 North Raymond Avenue Raymond Theatre Development	Apartment Retail Office Restaurant	75 du 5,077 sf 5,078 sf 5,078 sf
17	721 East Cordova Avenue	Retail	24,000 sf
18	651 North Orange Grove Boulevard	Horizon School	28,000 sf
19	35 North Delacey Avenue	Retail	42,260 sf
20	Corson Street/Marengo Street	Office	48,500 sf
21	Madison Avenue/Union Street	Parking Structure	200 spaces
22	939 South Fair Oaks Avenue	Assisted Living	117,000 sf
23	180 North Fair Oaks Avenue	Hotel	314 rooms
24	656 South Marengo Avenue	Townhouse	8 du
25	801 East Walnut Avenue	Apartment Restaurant Office	214 du 360 sf 3,600 sf
26	1021 East Colorado Boulevard Koll Office Building	Office Retail	150,600 sf 20,350 sf
27	171 South Lake Avenue Champion Development	Hotel Restaurant Retail	209 rooms 17,300 sf 14,000 sf
28	240 South Raymond Avenue Central Park Market at Del Mar Station	Apartment Restaurant Retail Parking	347 du 8,000 sf 10,000 sf 600 spaces
29	401 South Lake Avenue - Shops at South Lake Avenue	Retail/Restaura nt	150,216 sf
30	Fillmore Station	Parking	132 spaces

31	California Boulevard at Pasadena Avenue Huntington Avenue	Hospital Phase II Phase III	57,000 sf 152,275 sf
32	SEC of Fair Oaks Avenue and Orange County Boulevard	Pharmacy Retail	14,490 sf 7,200 sf
33	443 South Raymond Avenue	Condominium Light Industrial	47 du 8,953 sf
34	492 East Union Street - Pasadena Art Museum	Museum Residential	30,962 sf 1 du
35	290 Hudson Avenue	Apartment	140 du
36	S/O Green Street between Marengo Avenue and Euclid Avenue - Convention Center	Conference Room Expansion	60,000 sf
37	325 Cordova Street	Apartment Retail	135 du 2,100 sf
38	600-648 East Walnut Street	Multi Family	38 du
39	790 North Fair Oaks Avenue	Senior Housing	140 du

**TABLE 2.5-1 (CONTINUED)
RELATED PROJECTS**

Map No.	Address//Location	Land Use	Size Dwelling Units (du) Square Feet (sf)
40	Bounded by Green/Del Mar/Delacey/Orange Grove Ambassador Campus	Mixed Use Residential Office Retail	1 1,129 sf 960,000 sf 40,000 sf
41	50 West Dayton Avenue	Multi Family	20 du
42	707 South Raymond Avenue	Biotech Office	89,000
43	West Gateway Specific Plan Less Ambassador Campus Project	Mixed Use Mixed Use	6 1
44	120 South Raymond Avenue STATS on the Green Building A Building B Building C Less Previous Use	Commercial Multi Family Commercial Multi Family Restaurant Commercial Cinema Retail Office	47,000 sf 42 du 112,500 sf 59 du 11,100 sf 35,900 sf 84,300 sf 60,759 sf 3,220 sf
45	408 North Fair Oaks Avenue - Holiday Inn	Express Hotel	40 rooms
46	199 North Lake Avenue Koll Development Less Existing	Office Restaurant Retail Bank	200,000 sf 10,000 sf 10,000 sf 35,000 sf
47	720 East Colorado Street Archstone Pasadena	Apartment Retail Mixed Use	120 du 8,000 sf 8,167 sf
48	385 East Colorado Street Plaza Las Fuentes - Phase II	Office Retail	350,000 sf 50,000 sf

		Apartment	100 du
49	675 Rosemont Avenue - Kidspace Museum	Museum	35 employees
50	1888 North Fair Oaks Avenue	Senior Housing	65 du
51	55 South Fair Oaks Avenue	Retail Restaurant	15,442 sf 4,960 sf
52	3-49 Grand Avenue	Congregate Care	115 rooms
53	59 West Dayton Street	Apartment	42 du
54	390 Ashtabula Street	Apartment	21 du
55	270-280 North Madison Avenue	Condominium	40 du
56	727 South Arroyo Parkway	Retail	14,854 sf
57	771 East Union Street	Senior Apartment	72 du
58	635 Colorado Boulevard	Apartment Retail	313 du 24,900 sf
59	60 South Pasadena Avenue	Senior Care	15,243 sf

**TABLE 2.5-1 (CONTINUED)
RELATED PROJECTS**

Map No.	Address//Location	Land Use	Size Dwelling Units (du) Square Feet (sf)
60	140 North Oak Knoll Avenue	Condominium	72 du
61	St. Francis High School Expansion	Performing Arts	314 seats
62	La Canada Flintridge Downtown Village Specific Plan	Mixed Use	10
63	Foothill Boulevard and Commonwealth Avenue	Retail Restaurant	2,240 sf 2,240 sf

2.6 PROJECT ALTERNATIVES

Under CEQA, a range of reasonable alternatives must be included in an EIR that would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effect of the project (*CEQA Guidelines*, Section 15126, sub. D). As a result of the project formulation process, the City of Pasadena explored alternatives to the proposed project to assess their ability to meet most of the objectives of the project and reduce significant effects of the project. Alternative projects recommended by the scoping process were evaluated in light of the project objectives and their ability to reduce significant impacts as described in Section 4.0 of this draft *Master EIR*. Three project alternatives required under CEQA have been carried forward for detailed analysis in this draft *Master EIR*. The alternatives that were carried forward for detailed analysis included

- § No Project
- § Oak Grove Multi-use Play Field
- § East/West Parking Solutions
- § Two East Side Parking Structures

§ No Impact on Designated Critical Habitat

These alternatives are described and analyzed in Section 4.0 of this draft *Master EIR*.