US Army Corps of Engineers®

Sepulveda Dam Basin Vegetation Management Plan

Draft Supplemental Environmental Assessment

April 2016

U.S. Army Corps of Engineers

Los Angeles District

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1.0 Introduction

This Draft Environmental Assessment (EA) has been prepared by the U.S. Army Corps of Engineers (Corps) to comply with the National Environmental Policy Act (NEPA) and document compliance with applicable federal laws.

The EA characterizes the existing environmental conditions within the Proposed Action Area and evaluates potential environmental effects of the action alternatives as well as the No Action Alternative.

1.1 Location

The Proposed Action would occur in the Sepulveda Dam Basin, which is on the upper Los Angeles River in the San Fernando Valley, approximately 17 miles northwest of downtown Los Angeles, Los Angeles County, California. The Proposed Action Area is a roughly triangular-shaped, 48-acre parcel in the southeastern corner of the Sepulveda Dam Basin, south of Burbank Boulevard, and upstream of the dam (Figure 1-1; Proposed Action Area).

1.2 Background

Prior to December 2012, the Proposed Action Area had been generally heavily vegetated with nonnative, invasive species such as black mustard (*Brassica nigra*), wild fennel (*Foeniculum vulgare*), poison oak (*Toxicodendron diversilobum*), and poison hemlock (*Conium maculatum*), a variety of nonnative grasses, and several species of nonnative trees. Scattered through the northern third of the area were a few native trees such as valley oak (*Quercus lobata*) and sycamore (*Platanus racemosa*). Maintenance practices typically entailed annual removal of sediment from the concrete-lined section of the Los Angeles River south of Burbank Boulevard. As part of the annual activity, existing access roads were graded and cleared of intruding vegetation as needed.

Unchecked growth of nonnative invasive plants in the interior of the Proposed Action Area provided dense cover for a variety of unauthorized activities including encampments. The range of unauthorized activities include lewd activities and drug dealing. Walkers and joggers who use the maintenance roads through the area reported mugging incidents. Corps personnel have also been threatened. In addition, the presence of unauthorized encampments has resulted in accidental fires. The density and robust growth of vegetation also impeded emergency responses to the area resulting in at least one death.

Per requests from the city of Los Angeles including the Los Angeles Police Department, the Corps developed a vegetation management plan for the area in 2012. In late 2012, the Corps began vegetation removal to eradicate nonnative (invasive) plant species in the area south of Haskell Creek within Sepulveda Dam Basin (Basin) to improve public safety after finalization of the vegetation management plan.

Local stakeholders who frequented the area for nature walks and wildlife viewing voiced their concerns about the impacts of the activity on the vegetation. In response, the Corps temporarily suspended vegetation management activities in the area. Based on stakeholder feedback and concerns, the Corps developed a new vegetation management plan. From early 2013 through 2015, the Corps held a number of scoping meetings with local stakeholders as well as representatives from the city of Los Angeles and field representatives of various elected officials in development of the new vegetation management plan. The jointly developed plan would supersede the 2012 Vegetation Management Plan. In the interim, the Corps in coordination with local stakeholders applied herbicides to manage invasive vegetation and removed non-native trees from the area in January 2014.

In re-evaluating potential action alternatives, the Corps' ability to implement an alternative requires an independent evaluation of the Corps' existing authority as well as resource constraints and flood risk management project priorities.

The Corps receives annual appropriations for operation, maintenance and related activities at water resources projects for which the Corps retains responsibility. Operation and maintenance funds are allocated for the purpose of maintenance, repair, rehabilitation and operations of structures and other facilities. A subset of operations and maintenance dollars are provided specifically for environmental and natural resources stewardship (ENS). The types of activities that may be undertaken with ENS funds include non-native/invasive species removal, species surveys, pest control, and landscaping of native plants in a manner that is compatible with the flood risk management purpose. Only limited amounts of funding are available for ENS work. Activities beyond the scope of the operations and maintenance appropriation may not be compliant with Corps fiscal policy and will not receive funding through the Operations and Maintenance Funds account.

Where an alternative contemplates planting, mowing, removal or similar activities that do not significantly change the onsite conditions, flood risk management and ENS funds may be used at the discretion of the Corps. Significant changes that alter the land or structures located on a water resources and development project may not be implemented without further study and may require separate authorization. The Corps could be a cost-share partner for a study of this nature, but would require a non-federal partner and a study agreement. If a third party wishes to independently implement an alteration or modification on federal land, that party must apply for a permit pursuant to 33 U.S.C. Section 408 and/or a lease or easement from the United States if the United States is the fee owner such as the case at the Sepulveda Basin.

1.3 Purpose and Need

The approximately 48-acre area between Burbank Boulevard and Sepulveda Dam is designated as a Vegetation Management Area pursuant to the Sepulveda Dam Basin Master Plan. The presence of native and non-native vegetation within the area over time has resulted in use of the area for recreation such as nature walks and bird watching. Managing vegetation in support of dam operations or public safety affects the existing vegetation in the area, a valued resource for recreational users of the area. A need exists better balance vegetation management for dam

operations and public safety while maintaining a sufficient vegetation cover in the 48-acre area. The purpose of the proposed action is to adopt a new vegetation management plan that would balance vegetation maintenance needs with recreational services and biological functions provided by the existing vegetation cover.

1.4 Scoping

The Corps held number of scoping meetings in the development of the vegetation management plan as shown in Table 1-1.

TABLE 1-1
VEGETATION MANAGEMENT PLAN SCOPING AND ALTERNATIVES DEVELOPMENT MEETINGS

Meeting Date	Location	Stakeholder(s)
January 8, 2013	Sepulveda Dam	Representative Brad Sherman and staff
January 9, 2013	Los Angeles	Los Angeles City Councilmember Ed Reyes, District 1; Los Angeles City Councilmember Tom LaBonge, District 4
January 9, 2013	Los Angeles	San Fernando Valley Audubon Society
January 11, 2013	Encino	San Fernando Valley Audubon Society
January 11, 2013	Los Angeles	California State Senator Kevin de León
January 11, 2013	Los Angeles	Sierra Club Angeles Chapter
January 16, 2013	Los Angeles	Los Angeles City Councilmember Jan Perry, District 9
January 17, 2013	Conference call	California State Senator Fran Pavley staff
January 22, 2013	Los Angeles	Sepulveda Wildlife Steering Committee, Audubon Society; Neighborhood Councils; Los Angeles City Councilmember Paul Koretz, District 5; City of Los Angeles
January 28, 2013	Los Angeles	Ad Hoc Los Angeles River Committee
February 6, 2013	Encino	Sepulveda Wildlife Steering Committee, Audubon Society
February 7, 2013	Sepulveda Basin	City of Los Angeles Bureau of Sanitation
February 12, 2013	Sepulveda Basin	Colonel Mark Toy, Corps; District Leadership; Sepulveda Wildlife Steering Committee, Audubon Society
February 21, 2013	Encino	Sepulveda Wildlife Steering Committee, Audubon Society
February 25, 2013	Los Angeles	Los Angeles City Councilmembers, Los Angeles River Ad Hoc Committee
February 26, 2013	Encino	Sepulveda Wildlife Steering Committee, Audubon Society

Meeting Date	Location	Stakeholder(s)
February 27, 2013	Los Angeles	City of Los Angeles Bureau of Sanitation
March 19, 2013	Los Angeles	Los Angeles City Councilmembers, Los Angeles River Ad Hoc Committee
March 20, 2013	Encino	Sepulveda Wildlife Steering Committee, Audubon Society
April 23, 2013	Encino	Sepulveda Wildlife Steering Committee, Audubon Society
May 28, 2013	Encino	Sepulveda Wildlife Steering Committee, Audubon Society
March 25, 2014	Encino	Sepulveda Wildlife Steering Committee, Audubon Society
May 13, 2014	Encino	Sepulveda Wildlife Steering Committee, Audubon Society
August 1, 2014	Encino	Sepulveda Wildlife Steering Committee, Audubon Society
October 30, 2014	Encino	Sepulveda Wildlife Steering Committee, Audubon Society
December 15, 2014	Encino	Sepulveda Wildlife Steering Committee, Audubon Society
August 25, 2015	Encino	Sepulveda Wildlife Steering Committee, Audubon Society

All comments received by the Corps have been considered in the scoping stage of the planning process and have been used to inform the development of alternatives.

1.5 Proposed Action

The Corps proposes to adopt a new vegetation management plan to supersede the 2012 Vegetation Management Plan. The plan would better balance vegetation maintenance for dam operations and public safety with recreational uses and biological functions and services provided by the existing vegetation cover to wildlife.

Depending on the selected alternative, the vegetation management plan would include but not be limited to a combination of tree removal and maintenance, mowing and brush cutting, herbicide application, revegetation, and regular maintenance. In addition, emergency access for police and fire personnel would be improved and pedestrian access could be formalized. The specific vegetation management activities proposed in the four plan alternatives are described in Chapter 2 – Alternatives, along with the No Action Alternative.

Image Source: Copyright 2014, Google, (flown 2014)

Project Boundary - USACE Sepulveda Dam Basin

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FIGURE 1-1

Proposed Action Area

2.0 Alternatives

NEPA requires that federal agencies consider a reasonable range of alternatives that may meet the purpose and need as well as alternatives that are eliminated from detailed study, with a brief discussion of the reasons for eliminating them. The following section describes the No Action Alternative and four action alternatives.

The four action alternatives are deemed by the Corps to reasonably meet the purpose and need of the proposed action. Whether an alternative is considered reasonable is not the same as assessing whether the action agency is capable of implementing an alternative. The four action alternatives are carried forward for comparison purposes under NEPA.

2.1 Alternative 1 – No Action Alternative

Vegetation Management Activities

Vegetation management activities proposed under the No Action Alternative would include nonnative tree removal, mowing, herbicide application, and tree pruning as described below. The No Action Alternative is depicted in Figure 2-1.

Herbicide Application

Herbicide would be applied as needed to all nonnative vegetation in the Proposed Action Areawith either backpack sprayers or with a truck-mounted herbicide sprayer under the direction of a qualified biologist and licensed contractor holding a Qualified Applicator's License. All herbicide spraying would occur outside the bird nesting and breeding season. An herbicide that is effective yet has minimal adverse effects and based on the current growth stage of the vegetation would be used. Herbicide application would occur for Zone B, Zone Q, Zone L, and Zone SG.

Mowing

All shrubs in Zone B and Zone Q would be annually mowed and brush cut, respectively, to a height of approximately 3 feet outside of the bird nesting season.

Tree Maintenance (Native Trees)

Large (greater than 18 inches diameter breast height) native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet in order to open the canopy, add light, and improve public safety in the Proposed Action Area. Native trees would be monitored annually and treated as needed.

Tree Removal (Non-native Trees)

Non-native trees would be periodically removed and/or mulched in Zones B, Q, L, and SG as needed and as resources permit. Biomass would either be mulched and left in place or removed and disposed of at an off-site facility.

Access Management Activities

Access management activities would include maintenance of vehicular access roads and the dam operations zone. Access roads and the dam operations zone are depicted in Figure 2-1.

Improvement of Vehicular Access Roads

The Corps would manage existing vehicular access roads to remove vegetation. The vehicular access roads in the Proposed Action Area would be improved and leveled with decomposed granite to help ensure accessibility for police patrol and emergency vehicles. These access roads would be devoid of all vegetation.

The Corps would maintain a 3-foot by 3-foot buffer along the vehicular access roads. In this buffer Zone, trees would be pruned up to 12 feet and shrubs would be trimmed to a height of 3 feet, facilitating emergency access. All vegetation overhanging the roads would be completely removed and either mulched on-site or disposed of at an off-site facility. Vegetation removal may include the use of hand tools, line trimmers, and/or herbicide application with either backpack sprayers or with a truck-mounted herbicide sprayer. All maintenance would occur annually with follow-up maintenance occurring on an as needed basis.

Maintenance of Dam Operations Zone

Pursuant to Engineering Technical Letter (ETL) 1110-2-571, a dam operations zone extending 50 feet outwards from the toe of dam would be kept clear of vegetation. The access road located within the area would be subject to the same road maintenance regimen described above. This 2.3-acre dam operations zone in the Proposed Action Area would be maintained annually to be free of vegetation, with the exception of large native trees on the upstream side of the dam operations zone which would remain in place and be pruned up to 12 feet to facilitate emergency access. Biomass would either be mulched on-site or disposed of at an off-site facility. Vegetation removal may include the use of hand tools, line trimmers, and/or herbicide application with either backpack sprayers or with a truck-mounted herbicide sprayer.

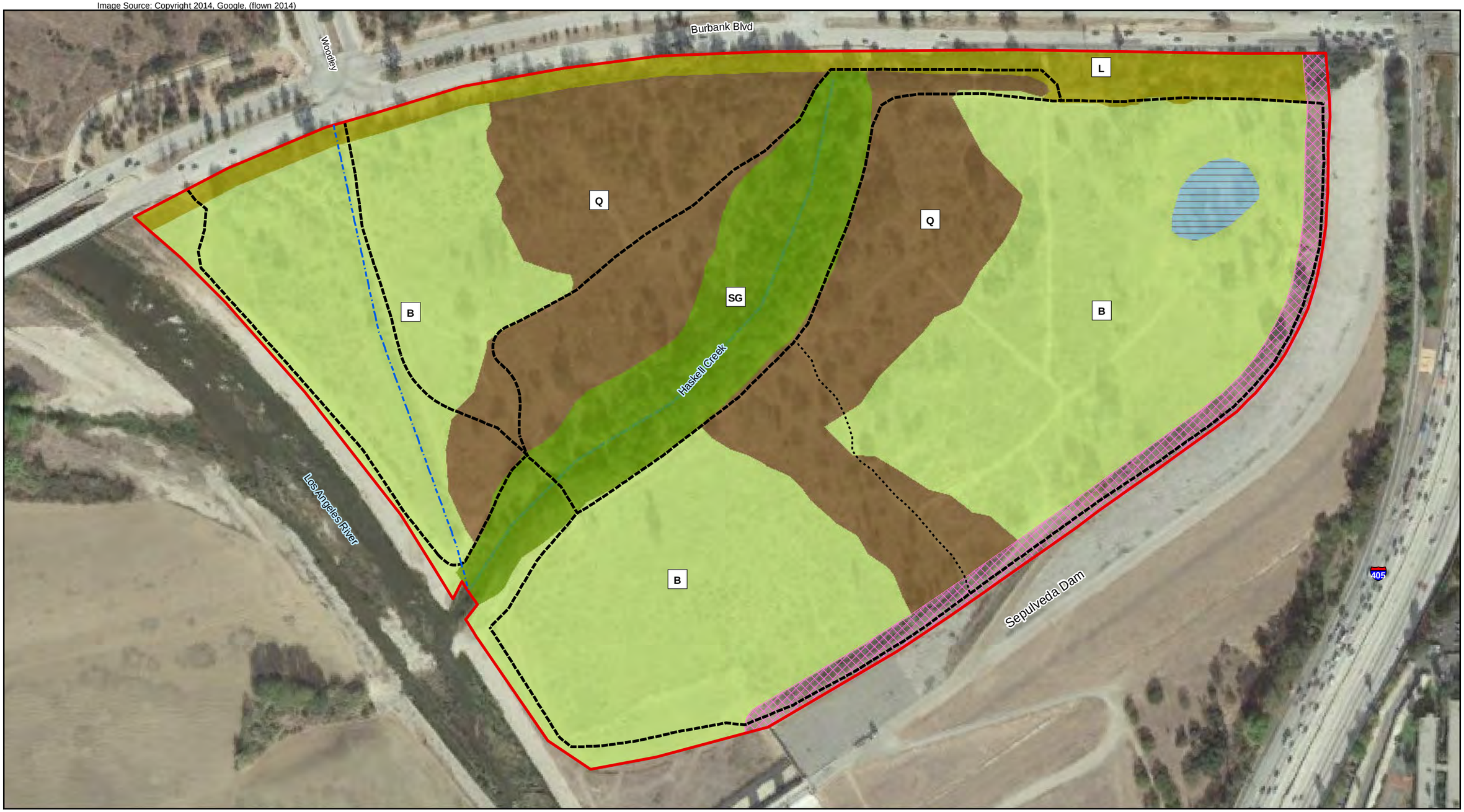
Table 2-1 shows the schedule for proposed vegetation management plan activities under the No Action Alternative.

TABLE 2-1
VEGETATION MANAGEMENT PLAN SCHEDULE
ALTERNATIVE 1, NO ACTION ALTERNATIVE

Management Activity	Schedule	Management Zone	Acreage*
Tree removal (Non-native Trees)	Periodically between the months of September and March as needed and as resources permit.	Zone B Zone Q Zone L Zone SG	31.5 acres 15.1 acres 3.3 acres 5.8 acres
Herbicide application	As needed between the months of September and March. Timing would be dependent on current weather conditions and type of plant being controlled.	Zone B Zone Q Zone L Zone SG	31.5 acres 15.1 acres 3.3 acres 5.8 acres
Tree maintenance (Native Trees)	Annually between the months of September and March as needed.	Zone B Zone Q Zone L Zone SG	31.5 acres 15.1 acres 3.3 acres 5.8 acres
Mowing	Annually between the months of September and March.	Zone B Zone Q	31.5 acres 15.1 acres
Improvement of vehicular access roads	Annually between the months of September and March.	Throughout the Proposed Action Area (see Figure 2-1)	8,778 linear feet, 14-foot width
Maintenance of dam operations Zone	Annually between the months of September and March.	Dam operations Zone	2.3 acres

† See Figure 1-2.
* Acreages may not total equal to the Proposed Action Area due to rounding.

Image Source: Copyright 2014, Google, (flown 2014)



Project Boundary - USACE Sepulveda Dam Basin

Un-named Drain

Dam Operation Zone (Width: 50ft)

Vegetation Management Zones

Salix goodingii Woodland Alliance (SG)

Quercus spp. Woodland Alliance (Q)

Bacharis pilularis Shrubland Alliance (B)

Seasonal Pond

Native Plant Landscape Buffer (L)

Vehicular Access

Pedestrian Access

0 Feet 200

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FIGURE 2-1

No-action Alternative

2.2 Vegetation Management Plan Activities Common to All Action Alternatives

This EA evaluates the No Action Alternative described above, as well as four action alternatives. While each of the four action alternatives considers a unique, targeted approach to vegetation management and access management in the Proposed Action Area, several vegetation management plan activities are common to all of these action alternatives and are described below.

Across all action alternatives, the existing vegetation Zones (see Figure 1-2) in the Proposed Action Area would be managed as independent Vegetation Management Areas. Vegetation Management Areas common to all alternatives include the *Baccharis pilularis* Zone as Zone B, the *Quercus* spp. Zone as Zone Q, and the native landscape buffer as Zone L. Each Vegetation Management Area would be managed independently based on the needs of the vegetation type. Proposed new vegetation type-specific management Zones (i.e., not existing) vary by alternative.

Vegetation Management Activities

Tree Removal (Non-native Trees)

Non-native trees in Zone B, Zone Q, Zone L, and Zone SG would be removed on an on-going basis. Biomass would either be mulched and left in place or removed and disposed of at an off-site facility. The number of acres over which tree removal would occur would vary by Vegetation Management Area and alternative. In Vegetation Management Areas that vary by alternative, tree removal would also occur, but on a different schedule.

Mowing

Mowing would be implemented in Zone B of the Proposed Action Area to reduce native monotypic shrub vegetation (i.e., *Baccharis pilularis*) to a height of 3 feet. Mowing would include the cutting of native vegetation using an articulated arm mower. The entire Zone B would be mowed at the same time, and all cut biomass would be mulched and left on-site. Management actions proposed for this area would allow for the regeneration of the desired native plant species while maintaining public safety. The specific timing of the activity and Zone mowed would vary by alternative.

Herbicide Application

Herbicide would be applied annually to all non-native vegetation in Zone B, Zone Q, Zone L, and Zone SG with either backpack sprayers or with a truck-mounted herbicide sprayer under the direction of a qualified biologist and licensed contractor holding a Qualified Applicator's License. All herbicide spraying would occur outside the bird nesting and breeding season. Herbicide appropriate to the type and growth stage of targeted non-native vegetation would be used. The number of acres over which herbicide application would occur and the schedule for application

would vary by vegetation Zone and alternative. In Vegetation Management Areas that vary by alternative, herbicide application would also occur, but would vary by Vegetation Management Area and schedule.

Tree Maintenance (Native Trees)

Large (greater than 18 inches diameter breast height) native trees in Zone B, Zone Q, Zone L, and Zone SG would be pruned to a height of 8 feet in order to open the canopy, add light, and improve public safety in the Proposed Action Area. Native trees would be monitored annually and treated as needed. The number of acres over which tree maintenance would occur would vary by vegetation Zone and alternative. Tree maintenance would also occur in other Vegetation Management Areas that vary by alternative.

Access Management Activities

Improvement of Vehicular Access Roads

Vehicular access roads would be improved and leveled with decomposed granite to help ensure accessibility for police patrol and emergency vehicles. These access roads would be devoid of all vegetation. A 3 foot wide buffer would be maintained on both sides of the roads. In this buffer Zone, trees would be pruned up to 12 feet and shrubs would be trimmed to a height of 3 feet, facilitating emergency access. All vegetation overhanging the roads would be completely removed and either mulched on-site or disposed of at an off-site facility. Vegetation removal may include the use of hand tools, line trimmers, and/or herbicide application with either backpack sprayers or with a truck-mounted herbicide sprayer. The area would be graded or improved with decomposed granite as needed. All maintenance would occur annually. The total Zone of vegetation removal for the vehicular access roads would vary slightly by alternative.

Maintenance of Dam Operations Zone

Pursuant to Engineering Technical Letter (ETL) 1110-2-571, the 2.3 acre Dam Operation Zone adjacent to the upstream toe of dam would be maintained annually to be free of vegetation. The area would be maintained much like an access road as described above. Biomass would either be mulched on-site or disposed of at an off-site facility. Vegetation removal may include the use of hand tools, line trimmers, and/or herbicide application with either backpack sprayers or with a truck-mounted herbicide sprayer. The area would be graded or improved with decomposed granite as needed.

2.3 Alternative 2 – Passive Management Alternative

Under Alternative 2, the Passive Management Alternative (Figure 2-1), the Corps would passively manage the Proposed Action Area to allow natural recruitment and revegetation. Revegetation would be achieved by treating nonnative species with herbicide, mowing or brush cutting, and allowing areas to passively revegetate. Mowing would occur once every three years in Zone B. Brush cutting would occur once every three years in Zone Q. Zone SG—the *Salix goodingii* Zone—would be monitored annually, with tree maintenance occurring as needed.

Herbicide would be applied once per year between the months of September and March. No container plant installation or seed application would occur.

Vegetation management plan activities proposed under Alternative 2 are described in more detail below and a schedule for these activities is provided. Vegetation management plan activities that are common to all action alternatives have been described in Section 2.2 – Vegetation Management Plan Activities Common to All Action Alternatives.

Vegetation Management Activities

Vegetation management activities proposed under Alternative 2 would include non-native tree removal, mowing, herbicide application, and tree maintenance as described under Section 2.2 – Vegetation Management Plan Activities Common to All Action Alternatives. Non-native tree removal, herbicide application, and tree maintenance would also occur for Zone SG. Additional vegetation management activities are described below.

Brush Cutting

Native monotypic vegetation (i.e., *Baccharis pilularis*) within Zone Q would be delineated from other vegetation and mowed with hand-held brush cutters to a height of 3 feet. Brush cutting would occur in conjunction (i.e., at the same time) with the mowing of Zone B.

Revegetation

Revegetation would occur in Zone SG and would include installing container plants, seeding, and allowing native volunteer recruitment to create the basic structure of the desired habitat (i.e., *Salix goodingii* Zone). Plants to be installed would include bunchgrass species such as giant wildrye (*Leymus condensatus*) and deer grass (*Muhlenbergia rigens*). Seed to be used during hand-seeding activities and/or for the propagation of container stock would be collected locally. If desired seed is not available locally, commercial sources may be used.

Access Management Activities

Access management activities proposed under Alternative 2 would include improvement of vehicular access roads, maintenance of the dam operations Zone, and creation of pedestrian routes as described under Section 2.2 – Vegetation Management Plan Activities Common to All Action Alternatives.

Improvement of Vehicular Access Roads

The vehicular access roads in the Proposed Action Area would be improved as described earlier under Section 2.2; all vegetation would be removed in a 14-foot-wide Zone totaling 8,778 linear feet.

Schedule

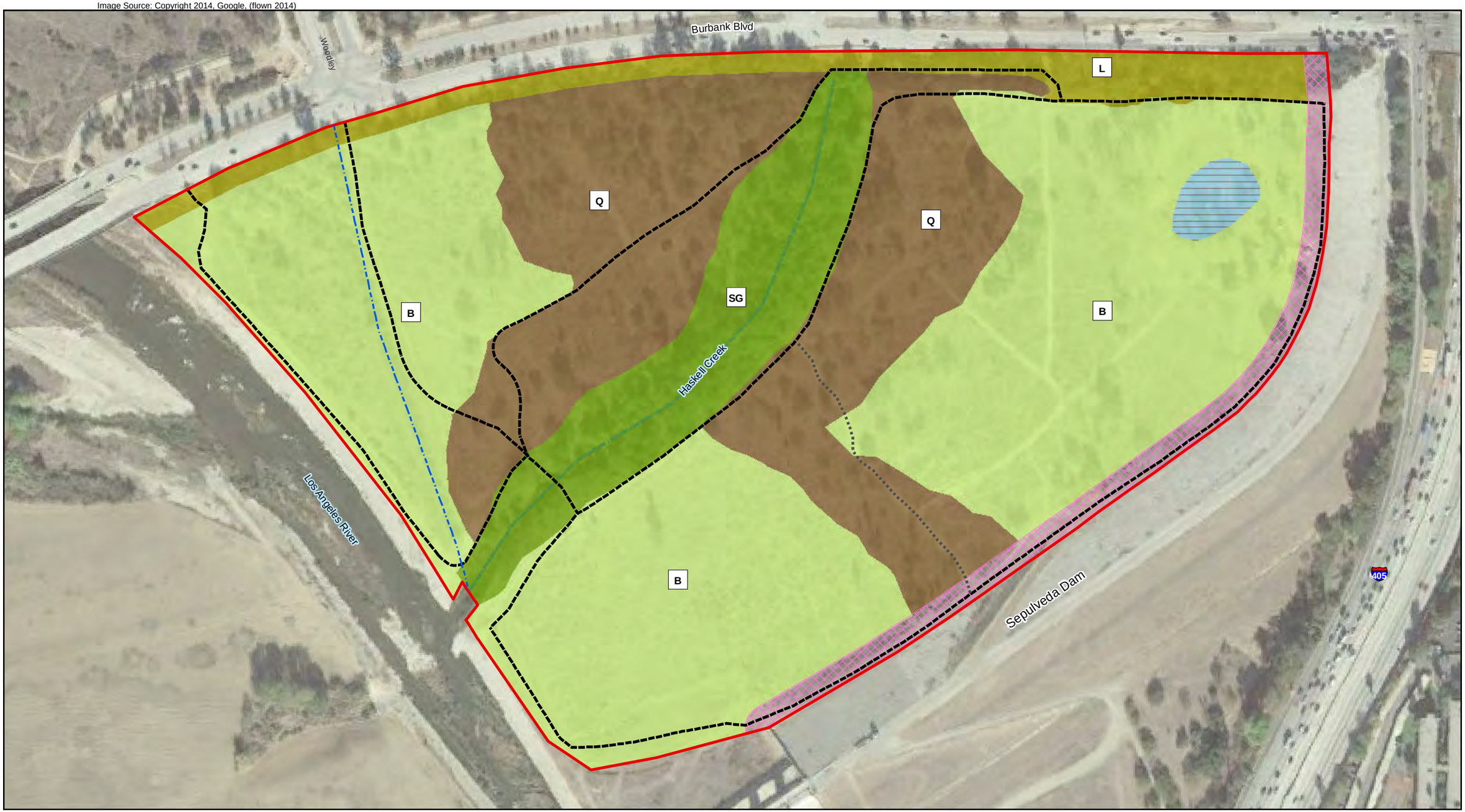
Table 2-2 shows the schedule for proposed vegetation management plan activities under Alternative 2.

TABLE 2-2
VEGETATION MANAGEMENT PLAN SCHEDULE
ALTERNATIVE 2, PASSIVE MANAGEMENT

Management Activity	Schedule	Management Zone	Acreage*
Tree removal (Non-native Trees)	Periodically between the months of September and March as needed and as resources permit.	Zone B Zone Q Zone SG Zone L	31.5 acres 15.1 acres 5.8 acres 3.3 acres
Herbicide application	Four times per year between the months of September and March. Timing would be dependent on current weather conditions and type of plant being controlled.	Zone B Zone Q Zone SG Zone L	31.5 acres 15.1 acres 5.8 acres 3.3 acres
Tree maintenance (Native Trees)	Annually between the months of September and March as needed.	Zone B Zone Q Zone L Zone SG	31.5 acres 15.1 acres 3.3 acres 5.8 acres
Mowing	Once every three years between the months of September and March.	Zone B	31.5 acres
Brush cutting	Once every three years between the months of September and March in conjunction with Zone B mowing (i.e., at the same time).	Zone Q	15.1 acres
Improvement of vehicular access roads	Annual maintenance between the months of September and March.	Throughout the Proposed Action Area (see Figure 2-1)	8,778 linear feet, 14-foot width
Maintenance of dam operations Zone	Annual maintenance between the months of September and March.	Dam operations Zone	2.3 acres
Creation of pedestrian access routes	Annual maintenance between the months of September and March.	See Figure 2-1	1,054 linear feet, 10-foot width

* Acreages may not total equal to the Proposed Action Area due to rounding.

Image Source: Copyright 2014, Google, (flown 2014)



Project Boundary - USACE Sepulveda Dam Basin

Un-named Drain

Dam Operation Zone (Width: 50ft)

Vegetation Management Zones

Salix goodingii Woodland Alliance (SG)

Quercus spp. Woodland Alliance (Q)

Bacharis pilularis Shrubland Alliance (B)

Seasonal Pond

Native Plant Landscape Buffer (L)

Vehicular Access

Pedestrian Access

0 Feet 200

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FIGURE 2-2

Passive Management Alternative

2.4 Alternative 3 – Phased Mowing Alternative

Under Alternative 3, the Phased Mowing Alternative (Figure 2-2), Zones B and Q would be treated in a phased approach, with mowing occurring for each Zone once every four years and allowing native species to regenerate.

Vegetation management plan activities proposed under Alternative 3 are described in more detail below and a schedule for these activities is provided in Section 2.4.3. Vegetation management plan activities that are common to all action alternatives have been described in Section 2.2 – Vegetation Management Plan Activities Common to All Action Alternatives.

Vegetation Management Activities

Vegetation management activities proposed under Alternative 3 would include tree removal, herbicide application, and tree maintenance as described under Section 2.2 – Vegetation Management Plan Activities Common to All Action Alternatives. Tree removal, herbicide application, and tree maintenance would also occur for Zone SG. Additional vegetation management activities are described below.

Mowing

Under Alternative 3, mowing for Zone B would occur in three subdivided Zones: Zone B1 (9.2 acres), Zone B2 (13.2 acres), and Zone B3 (9.0 acres; see Figure 2-2). Each Zone would be mowed once every four years using an articulated arm mower.

Brush Cutting

Similar to Alternative 2, brush cutting would occur in Zone Q. Brush cutting would occur once every four years, as part of the mowing cycle (the fourth year) for Zones B1, B2, and B3. Brush cutting in Zone Q would not occur during a Zone B mowing year. Native vegetation occurring in low densities (less than 5 percent cover), such as currant (*Ribes* sp.) and gooseberry (*Ribes* sp.), would be avoided. All cut biomass would be left on-site. *Baccharis pilularis* within Zone Q would be delineated from other vegetation and mowed with hand-held brush cutters to a height of 3 feet

Access Management Activities

Access management activities proposed under Alternative 3 would include improvement of vehicular access roads, maintenance of dam operations Zone, and creation of pedestrian routes as described under Section 2.2 – Vegetation Management Plan Activities Common to All Action Alternatives.

Improvement of Vehicular Access Roads

The improvement of vehicular access roads in the Proposed Action Area would be the same as described under Alternative 2.

Schedule

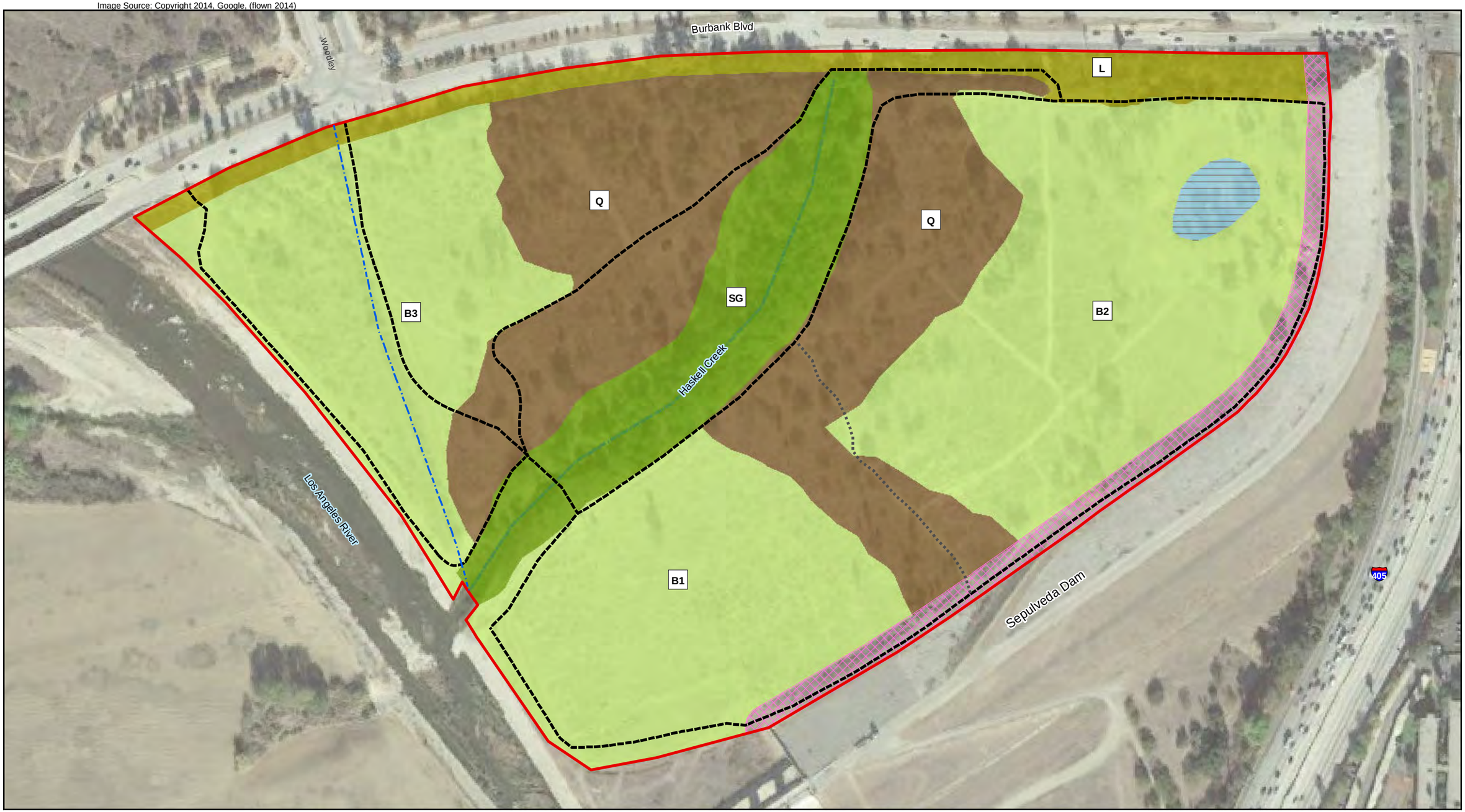
Table 2-3 shows the schedule for proposed vegetation management plan activities under Alternative 3.

TABLE 2-3
VEGETATION MANAGEMENT PLAN SCHEDULE
ALTERNATIVE 3, PHASED MOWING

Management Activity	Schedule	Management Zone	Acreage*
Tree removal (Non-native Trees)	Periodically, between the months of September and March as needed and as resources permit.	Zone B Zone Q Zone SG Zone L	31.5 acres 15.1 acres 5.8 acres 3.3 acres
Herbicide application	Four times per year between the months of September and March. Timing would be dependent on current weather conditions and type of plant being controlled.	Zone B Zone Q Zone SG Zone L	31.5 acres 15.1 acres 5.8 acres 3.3 acres
Tree maintenance (Native Trees)	Annually between the months of September and March as needed.	Zone B Zone Q Zone L Zone SG	31.5 acres 15.1 acres 3.3 acres 5.8 acres
Mowing	Conducted in four annual phases; only one phase of mowing would be conducted per year (between the months of September and March) for a total rotation cycle of four years.	Zone B1 Zone B2 Zone B3	9.2 acres 13.2 acres 9.0 acres
Brush cutting	Once every four years between the months of September and March, in the rotation cycle associated with the area B mowing schedule.	Zone Q	15.1 acres
Improvement of vehicular access roads	Annual maintenance between the months of September and March.	Throughout the Proposed Action Area(see Figure 2-2)	8,778 linear feet, 14-foot width
Maintenance of dam operations Zone	Annual maintenance between the months of September and March.	Dam operations Zone	2.3 acres
Creation of pedestrian access routes	Annual maintenance between the months of September and March.	See Figure 2-2	1,054 linear feet, 10-foot width

* Acreages may not total equal to the Proposed Action Area due to rounding.

Image Source: Copyright 2014, Google, (flown 2014)



Project Boundary - USACE Sepulveda Basin

Un-named Drain

Dam Operation Zone (Width: 50ft)

Vegetation Management Zones

Salix goodingii Woodland Alliance (SG)

Quercus spp. Woodland Alliance (Q)

Bacharis pilularis Shrubland Alliance (B1, B2, B3)

Seasonal Pond

Native Plant Landscape Buffer (L)

Vehicular Access

Pedestrian Access

0 Feet 200

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FIGURE 2-3

Phased Mowing Alternative

2.5 Alternative 4 – South Marsh Alternative

Under Alternative 4, the South Marsh Alternative (Figure 2-3), Zone B and Zone Q would be managed in the same phased approach manner described under Alternative 3. In addition, the Corps would create an approximate 4.6-acre marsh habitat (*Juncus acutus*; Zone J) in the Proposed Action Area. Zone J would be graded to lower and expand the existing Sepulveda Dam Basin elevation to support a *Juncus acutus* vegetation type (i.e., marsh habitat) adjacent to Haskell Creek.

In the spiny rush (*Juncus acutus*) vegetation type, (*Juncus acutus*) is dominant or co-dominant in the herbaceous layer with yarrow (*Achillea millefolium*), sedge (*Carex* spp.), saltgrass (*Distichlis spicata*), and bulrush (*Schoenoplectus* spp). Emergent trees or shrubs may be present at a low cover. Zone J would be revegetated by installing container plants, installing cuttings, seeding, and allowing native volunteer recruitment to create the basic structure of the *Juncus acutus* vegetation type. Excavated soil resulting from marsh creation would be removed from the site. In addition, culverts would be installed to allow water to flow from Haskell Creek to Zone J.

Vegetation management plan activities proposed under Alternative 4 are described in more detail below and a schedule for these activities is provided. Vegetation management plan activities that are common to all action alternatives have been described above (see Section 2.2–Vegetation Management Plan Activities Common to All Action Alternatives).

Vegetation Management Activities

Vegetation management activities proposed under Alternative 4 would include tree removal, herbicide application, and tree maintenance as described under Section 2.2–Vegetation Management Plan Activities Common to All Action Alternatives. In addition, tree removal, herbicide application, and tree maintenance would occur for Zones SG and J. Additional vegetation management activities are described below.

Mowing

Zone B would be subdivided into three Zones: Zone B1 (4.6 acres), Zone B2 (13.2 acres; including the seasonal pond), and Zone B3 (9.0 acres; see Figure 2-3). Each Zone would be mowed once every four years using an articulated arm mower.

Brush Cutting

The same as described under Alternative 3, native monotypic vegetation in Zone Q would be cut to a height of 3 feet. Brush cutting would occur once every four years, as part of the mowing cycle (the fourth year) for Zones B1, B2, and B3. Brush cutting in Zone Q would not occur in a Zone B mowing year.

Revegetation

Revegetation activities in Zone J would include installing native container plants and/or cuttings, hand seeding with native seed, and allowing native volunteer recruitment to create the basic structure of the desired habitat (plants typically occurring within these vegetation types). Plants would be installed at a density of approximately 1,800 plants per acre. Native cover should equate to approximately 85 percent by Year 5 of plan implementation. In Zone J, seed to be used for hand-seeding and/or for the propagation of container stock would be collected locally in the amount of 40 pounds of seed per acre. If the preferred seed is not available, commercial sources may be used.

Grading

After all vegetation has been cleared in Zone J, the area would be graded to a depth of 3 feet, using heavy machinery to achieve the proper hydrology to support wetland vegetation by lowering and expanding the area adjacent to and south of Haskell Creek. The target hydrologic regime would be supported by diverting water from Haskell Creek via culverts and maintaining a constant water level via installed water-control structures. Installation of the culverts and water-control structures is discussed below. Excavated soil associated with grading would be removed from the site. An estimated 22,264 cubic yards of soil would be removed. The final amount would be determined upon approval of project design.

Installation of Infrastructure

Culverts would be installed in Zone J to allow the flow of water from Haskell Creek to the newly created marsh Zone. Water control structures would be installed to help maintain a constant water level in the creek. The number, size, and location of culverts and water-control structures would be determined upon approval of project design.

Remedial Planting/Seeding

Should performance standards (i.e., native percent cover described under Revegetation section, above) not be achieved for Zone J, remedial planting and/or seeding would occur.

Monitoring

Qualitative and quantitative monitoring of revegetated Zones in Zone J would be conducted to assess native and nonnative vegetative cover, species diversity, and density.

Access Management Activities

Access management activities proposed under Alternative 4 would include improvement of vehicular access roads, maintenance of dam operations Zone, and creation of pedestrian routes as described under Section 2.2 – Vegetation Management Plan Activities Common to All Action Alternatives.

Improvement of Vehicular Access Roads

The vehicular access roads in the Proposed Action Area would be improved as described earlier under Section 2.2, and all vegetation would be removed in a 14-foot-wide Zone totaling 8,429 linear feet.

Schedule

Table 2-4 shows the schedule for proposed vegetation management plan activities under Alternative 4.

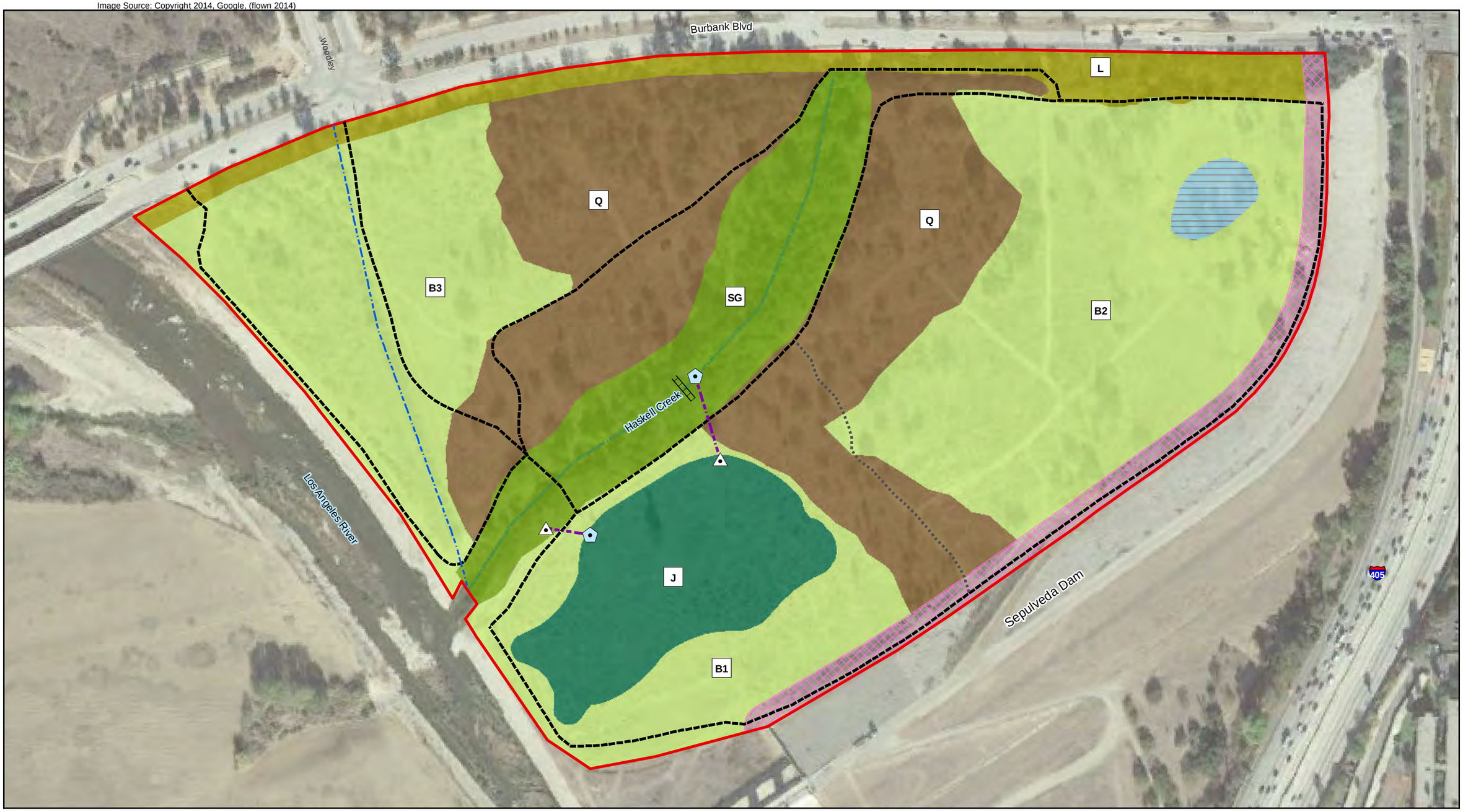
TABLE 2-4
VEGETATION MANAGEMENT PLAN SCHEDULE
ALTERNATIVE 4, SOUTH MARSH

Management Activity	Schedule	Management Zone	Acreage*
Tree removal (Non-native Trees)	Periodically, between the months of September and March as needed and as resources permit.	Zone B Zone Q Zone SG Zone L	31.5 acres 15.1 acres 5.8 acres 3.3 acres
Tree removal	Year 1 implementation, between the months of September and March.	Zone B Zone Q Zone SG Zone L	26.9 acres 15.1 acres 5.8 acres 3.3 acres
	Once every 3 years between the months of September and March, while trees are saplings	Zone J	4.6 acres
Herbicide application	Four times per year between the months of September and March. Timing would be dependent on current weather conditions and type of plant being controlled.	Zone B Zone Q Zone L	26.9 acres 15.1 acres 3.3 acres
	Two times per year between the months of September and March. Timing would be dependent on current weather conditions and type of plant being controlled.	Zone SG	5.8 acres
	Four times per year (between the months of September and March) for the first two years following revegetation, then twice per year (between the months of September and March) for the remainder of the plan.	Zone J	4.6 acres
Tree maintenance	Annually between the months of September and March as needed.	Zone B Zone Q Zone SG Zone J	26.9 acres 15.1 acres 5.8 acres 4.6 acres
Mowing	Conducted in four annual phases; only one phase of mowing would be conducted per year (between the months of September and March) for a total rotation cycle of four years.	Zone B1 Zone B2 Zone B3	4.6 acres 13.2 acres 9.0 acres

Management Activity	Schedule	Management Zone	Acreage*
Brush cutting	Once every 4 years between the months of September and March, in the rotation cycle associated with the area B mowing schedule.	Zone Q	15.1 acres
Revegetation	Between the months of October and March and/or when soil moisture is optimal and as determined by a qualified biologist.	Zone J	5.8 acres 4.6 acres
Grading	Over a 2-month period, preferably before the onset of the rainy season, or as determined by a qualified biologist.	Zone J	An estimated 22,264 cubic yards of soil would be removed. The final amount would be determined upon approval of project design.
Installation of infrastructure	Water control structures would be set to a predetermined height as determined by Corps project management personnel.	Zone J	The number and size of culverts and water control structure would be determined upon approved project design.
Remedial planting/seeding	Between the months of October and March and/or when soil moisture is optimal and as determined by a qualified biologist.	Zone J	4.6 acres
Monitoring	Qualitative to occur quarterly; quantitative to occur annually in the spring.	Zone J	4.6 acres
Improvement of vehicular access roads	Annual maintenance between the months of September and March.	Throughout the Proposed Action Area (see Figure 2-3)	8,429 linear feet, 14-foot width
Maintenance of dam operations Zone	Annual maintenance between the months of September and March.	Dam operations Zone	2.3 acres
Creation of pedestrian access routes	Annual maintenance between the months of September and March.	See Figure 2-3	1,054 linear feet, 10-foot width

* Acreages may not total equal to the Proposed Action Area due to rounding.

Image Source: Copyright 2014, Google, (flown 2014)



Project Boundary - USACE Sepulveda Dam Basin
Un-named Drain
Engineered Culvert (Depth: TBD)
Culvert (Inlet / Outlet)
Water Control Structure
Grade Control Devices

Dam Operation Zone (Width: 50ft)

Vegetation Management Zones

Juncus acutus Herbaceous Alliance (J)
Salix goodingii Woodland Alliance (SG)
Quercus spp. Woodland Alliance (Q)
Bacharis pilularis Shrubland Alliance (B1, B2, B3)
Seasonal Pond
Native Plant Landscape Buffer (L)

Vehicular Access
Pedestrian Access

0 Feet 200

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FIGURE 2-4

South Marsh Alternative

2.6 Alternative 5 – Sinuous Channel Alternative

Under Alternative 5, the Sinuous Channel Alternative (Figure 2-4), the Corps would conduct mowing and other vegetation management activities within the Proposed Action Area to enhance the existing vegetation Zones and improve public safety and dam operations. Using a phased approach, the Corps would mow Zone B and Zone Q once every four years, allowing native species to regenerate. In addition, the existing Haskell Creek would be graded to create a channel consisting of gentle bends (Zone OW), thereby decreasing the flow velocities through Haskell Creek. *Schoenoplectus californicus* (Zone SC, 2.6 acres) and *Juncus acutus* (Zone J, 2.8 acres) vegetation Zones would be created within the graded portions on each side of Haskell Creek. Creation of these Zones would include revegetation through a combination of container plants, cuttings, seed, and native volunteer recruitment. Materials generated from grading activities would be used to create access Zones along the perimeter of the channel and placed in a fill site. These vegetation-free Zones would be developed to allow for law enforcement visibility and access.

In the *Schoenoplectus californicus* vegetation type, California bulrush (*Schoenoplectus californicus*) is dominant or co-dominant in the herbaceous layer with sea clubrush (*Bolboschoenus maritimus*), water hyacinth (*Eichhornia crassipes*), western goldenrod (*Euthamia occidentalis*), common tule (*S. acutus*), southern cattail (*Typha domingensis*), and broadleaf cattail (*Typha latifolia*) Emergent California rose (*Rosa californica*) or willow (*Salix* spp.) shrubs may be present at low cover.

Vegetation management plan activities proposed under Alternative 5 are described in more detail below and a schedule for these activities is provided under Section 2.5. Vegetation management plan activities that are common to all action alternatives have been described above (see Section 2.2).

Vegetation Management Activities

Vegetation management activities proposed under Alternative 5 would include tree removal, herbicide application, and tree maintenance as described under Section 2.2. In addition, tree removal would occur for Zones SC, J, and OW; herbicide application would occur for Zones SC, J, and OW; tree maintenance would occur for Zones SC and J. Additional vegetation management activities are described below.

Mowing

Zone B would be subdivided into three Zones: Zone B1 (9.3 acres), Zone B2 (13.1 acres; including the seasonal pond), and Zone B3 (10.1 acres; see Figure 2-4). The same as described under Alternative 3, each Zone would be mowed once every four years.

Brush Cutting

The same as described under Alternative 3, native monotypic vegetation in Zone Q would be cut once every four years, as part of the mowing cycle (the fourth year) for Zones B1, B2, and B3.

Revegetation

The same as described under Alternative 4, revegetation would occur in Zone J. Revegetation would include installing native container plants and/or cuttings, hand seeding with native seed, and allowing native volunteer recruitment to create the basic structure of the desired habitat (plants typically occurring within the vegetation type), the same as under Alternative 4.

Grading

Similar to Alternative 4, grading under Alternative 5 would occur after Zone SC has been cleared of all vegetation. Heavy machinery would be used to achieve the proper hydrology to support wetland vegetation for Zone SC by lowering the existing elevation to create a gradient toward Haskell Creek. The target hydrologic regime would be supported by the reconfiguration of the existing creek by grading activities.

Grading activities for Zone J would be similar to those described above for Zone SC. Heavy machinery would be used to grade the area in order to achieve the proper hydrology to support wetland vegetation, such as spiny rush.

Portions of the cut soil from grading activities in Zones SC and J would be used to create earthen Zones, which would run parallel to the creek on both sides. These Zones would also protect the site during flood events and aid the Corps in protecting public safety. An estimated 12,584 cubic yards of soil would be removed in Zone SC and 13,552 cubic yard would be removed from Zone J. The final amount would be determined upon approval of project design.

Installation of Infrastructure

Logs would be installed along Haskell Creek (Zone OW) to serve as natural check dams. Depending on the final design of the check dams, between 5 and 10 may be required; the size of the dams would be determined based on the channel width.

The logs would be obtained from trees removed during grading activities. Installation of the check dams would occur over a two-month period before the onset of the rainy season or as directed by a qualified biologist.

Remedial Planting/Seeding

Should performance standards (i.e., native percent cover described under Revegetation section, above) not be achieved for Zones SC and J, remedial planting and/or seeding would occur.

Monitoring

Qualitative and quantitative monitoring of revegetated Zones in Zones SC and J would be conducted to assess native and nonnative vegetative cover, species diversity, and density.

Access Management Activities

Vehicular Access

The vehicular access roads in the Proposed Action Area would be improved as described earlier under Section 2.2, and all vegetation would be removed in a 14-foot-wide Zone totaling 7,467 linear feet. The area would include vegetation-free Zone on the north and south sides of Haskell Creek, which would have a maximum height of 3 feet and a maximum width of 14 feet.

Schedule

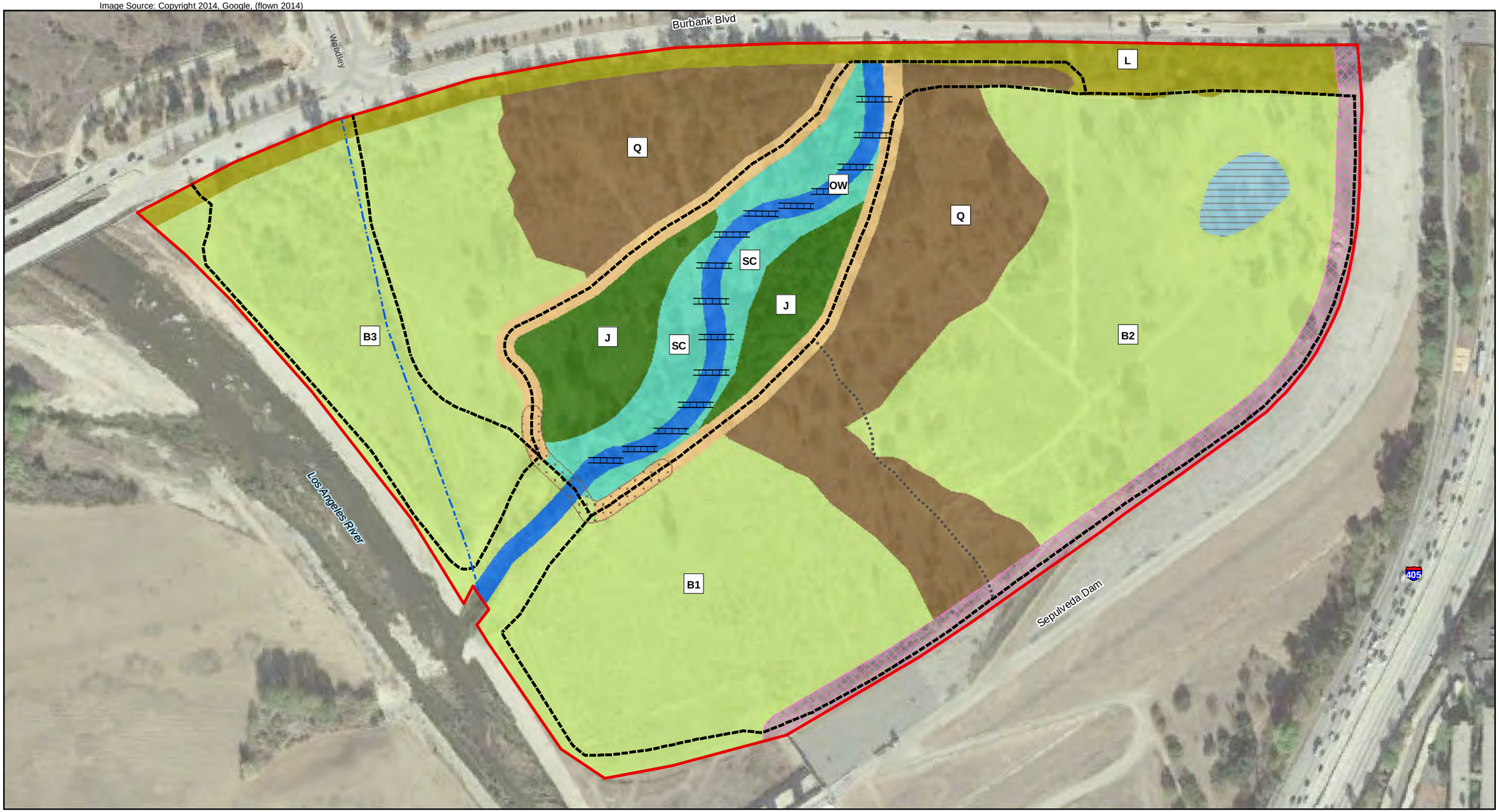
Table 2-5 shows the schedule for proposed vegetation management plan activities under Alternative 5.

TABLE 2-5
VEGETATION MANAGEMENT PLAN SCHEDULE
ALTERNATIVE 5, SINUOUS CHANNEL

Management Activity	Schedule	Management Zone	Acreage*
Tree removal (Non-native Trees)	Periodically, between the months of September and March as needed and as resources permit.	Zone B Zone Q Zone SG Zone L	31.5 acres 15.1 acres 5.8 acres 3.3 acres
Tree removal	Year 1 implementation, between the months of September and March.	Zone B Zone Q Zone L	32.5 acres 10.9 acres 3.3 acres
	Once every 3 to 5 years between the months of September and March.	Zone SC Zone J Zone OW	2.6 acres 2.8 acres 1.4 acres
Herbicide application	Twice per year between the months of September and March. Timing would be dependent on current weather conditions and type of plant being controlled.	Zone B Zone Q Zone L	32.5 acres 10.9 acres 3.3 acres
	Four times per year (between the months of September and March) for the first two years following revegetation, then twice per year (between the months of September and March) for the remainder of the plan.	Zone SC Zone J	2.6 acres 2.8 acres
	Once per year between the months of September and March; timing would be dependent on current weather conditions and type of plant being controlled.	Zone OW	1.4 acres
Tree maintenance	Annually between the months of September and March as needed.	Zone B Zone Q Zone SC Zone J	32.5 acres 10.9 acres 2.6 acres 2.8 acres
Mowing	Conducted in four annual phases; only one phase of mowing would be conducted per year (between the months of September and March) for a total rotation cycle of four years.	Zone B1 Zone B2 Zone B3	9.3 acres 13.1 acres 10.1 acres

Management Activity	Schedule	Management Zone	Acreage*
Brush cutting	Once every 4 years between the months of September and March, in the rotation cycle associated with the area B mowing schedule.	Zone Q	10.9 acres
Revegetation	Between the months of October and March and/or when soil moisture is optimal and as determined by a qualified biologist.	Zone SC Zone J	2.6 acres 2.8 acres
Grading	Over a 2-month period, preferably before the onset of the rainy season, or as determined by a qualified biologist.	Zone SC	An estimated 12,584 cubic yards of soil would be removed. The final amount would be determined upon approval of project design.
		Zone J	An estimated 13,552 cubic yards of soil would be removed. The final amount would be determined upon approval of project design.
Installation of infrastructure	Over a 2-month period, preferably before the onset of the rainy season, or as determined by a qualified biologist.	Zone OW	Depending on the final design of the check dams, between 5 and 10 may be required; the size of the dams would be determined based on the width of the channel.
Remedial planting/seeding	Between the months of October and March and/or when soil moisture is optimal and as determined by a qualified biologist.	Zone SC Zone J	2.6 acres 2.8 acres
Monitoring	Qualitative to occur quarterly; quantitative to occur annually in the spring.	Zone SC Zone J	2.6 acres 2.8 acres
Improvement of vehicular access roads	Annual maintenance between the months of September and March.	Throughout the Proposed Action Area(see Figure 2-4)	7,467 linear feet, 14-foot width
Maintenance of dam operations Zone	Annual maintenance between the months of September and March.	Dam operations Zone	2.3 acres
Creation of pedestrian access routes	Annual maintenance between the months of September and March.	See Figure 2-4	1,054 linear feet, 10-foot width

Image Source: Copyright 2014, Google, (flown 2014)



Project Boundary - USACE Sepulveda Dam Basin
Un-named Drain
Grade Control Devices
Dam Operation Zone (Width: 50ft)
Rip-rap Bridge Footing

Vegetation Management Zones

Schenoplectus californicus Herbaceous Alliance (SC)
Juncus acutus Harbaceous Alliance (J)
Quercus spp. Woodland Alliance (Q)
Bacharis pilularis Shrubland Alliance (B1, B2, B3)

Native Plant Landscape Buffer (L)
Vegetation-Free Berm
Open Water (OW)
Seasonal Pond

Vehicular Access
Pedestrian Access

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FIGURE 2-5

Sinuous Channel Alternative

3.0 Affected Environment and Environmental Consequences

3.1 Land Use

Affected Environment

The Proposed Action Area is within the Sepulveda Dam Basin, an Zone that supports multiple uses, including recreation, water reclamation, wildlife preserves, and military facilities.

Land uses in the immediate vicinity of the Proposed Action Area includes the Sepulveda Basin Wildlife Preserve north of Burbank Boulevard; an agricultural field to the west, across from the Los Angeles River; a municipal golf course to the northwest; commercial and residential Zones, across Interstate 405; and a spillway and Corps operations and maintenance Zone to the south, immediately downstream of Sepulveda Dam.

The Proposed Action Area and its vicinity were historically used for agriculture subsequent to the completion of the dam in 1941. Agricultural uses ceased circa 1980. Currently, the Proposed Action Area is classified in the Sepulveda Dam Basin Master Plan as Vegetation Management. The master plan defines this land use classification as lands to be managed for the protection and development of forest and vegetative cover. South of Haskell Creek, the land contains native and nonnative trees, nonnative shrubs, weeds, and grasses. Similar vegetation is found north of Haskell Creek. Haskell Creek banks are covered with a dense canopy of native and nonnative trees with little understory. Since this area is not out-granted for other uses, including recreation use, access is restricted to authorized personnel and no recreation amenities have been developed. However, passive recreational uses such as nature walks and bird watching do occur on-site.

Significance Threshold

Impacts would be considered significant if the alternative:

- Permanently conflicts with existing land uses or with adjacent, offsite land uses.

Environmental Consequences

Alternative 1: No Action Alternative

There would be no change to the existing land use or land-use patterns under Alternative 1, the No Action Alternative. There would be no change in the designated land use classification of Sepulveda Dam Basin Vegetation Management Area. As a result, there would be no significant impact on land use under the No Action Alternative.

Alternative 2: Passive Management Alternative

Impacts under Alternative 2 would be similar to those characterized under Alternative 1.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1.

Alternative 4: South Marsh Alternative

Impacts under Alternative 4 would be similar to those characterized under Alternative 1.

Construction of the marsh may result in additional passive recreational use of the area. However, passive recreation is an existing use of the land. Thus, the existing use would remain and would be further enhanced. As a result, there would be no significant adverse impact on land use.

Alternative 5: Sinuous Channel Alternative

Impacts under Alternative 5 would be similar to those characterized under Alternative 1.

Construction of the sinuous channel may result in additional passive recreational use of the area. However, passive recreation is an existing use of the land. Thus, the existing use would remain and would be further enhanced. As a result, there would be no significant adverse impact on land use.

3.2 Soils

Affected Environment

The greater part of the San Fernando Valley is overlain by recent alluvium, consisting of unconsolidated and un-weathered, poorly graded clay, silt, gravel, and boulders. The Sepulveda Dam Basin is entirely covered by recent alluvium composed of relatively fine material (Corps 2012a).

The Natural Resources Conservation Service (NRCS) reported four different soil groups within the Proposed Action Area—Capistrano, Conejo, Cropley, and Mocho. The Capistrano soil group covers approximately 5.5 percent of the Proposed Action Area. A fine, sandy loam comprising mixed alluvium derived from granite, Capistrano is commonly found along river valleys. The Conejo soil group is found along river valleys, and makes up approximately 47.3 percent of the Proposed Action Area. Conejo is a well-drained clay loam derived from young, mixed alluvium. The Cropley soil group covers approximately 29.4 percent of the Proposed Action Area. It is a well-drained, clay alluvium derived from calcareous shale. Lastly, the Mocho soil group makes up approximately 17.9 percent of the Proposed Action Area. It is a well-drained loam comprising young alluvium. The Capistrano, Conejo, and Cropley soil groups are all within 0 to 2 percent slope topography with fast-draining, nonsaline soils. The Mocho soil group has 2 to 9 percent slope topography (NRCS 2015).

Significance Threshold

Impacts would be considered significant if the alternative:

- Substantially increases wind or water erosion of soils or loss of topsoil

Environmental Consequences

Alternative 1: No Action Alternative

Activities would entail application of herbicides to non-native vegetation; annual mowing of all shrubs in Zone B and Zone Q; trimming of native trees in Zones B, Q, L, and SG to a height of 8 feet; periodic removal of non-native trees as needed and as resources permit; and maintenance of access roads and the dam operations zone. The vegetation management activities would not substantially increase wind or water erosion. The area would remain vegetated. Vegetation would provide a continuous vegetative cover with a fibrous root system that would reduce wind erosion of top soil and minimize inundation erosion by flood waters. Furthermore, cut vegetation would be chipped and spread onsite as practicable. Thus, ground cover would be increased, preventing wind or water erosion. The potential for soil erosion would also be reduced by the compaction of soil and use of decomposed granite when improving and maintaining the vehicular access roads, pedestrian access roads, and dam operations Zone. Herbicide treatments would not result in soil disturbances. Impacts would be less than significant.

Alternative 2: Passive Management Alternative

Impacts under Alternative 2 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. However, mowing in Zone B and brush cutting in Zone Q would occur once every three years allowing for additional growth of shrubs when compared to the No Action Alternative. Thus, the frequency of disturbance to soils associated with mowing and brush clearing activities would be reduced to once every three years. Impacts would be less than significant.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. Bowing and brush cutting would occur once every four years and would be rotated across Zones B1, B2, B3 and Q. Thus, the frequency of disturbance to soils associated with mowing and brush clearing activities would be reduced to once every three years and would be rotated across Zones B1, B2, B3 and Q. Impacts would be less than significant.

Alternative 4: South Marsh Alternative

Zones B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

An approximately 4.6-acre marsh habitat would be established in Zone J, a sub-area of Zone B1 (see Figure 2-4). Construction would include earthmoving activities such as excavating and grading. Earth moving activities may have the potential to increase runoff and erosion in the short term due to mechanical disruption of the soil resulting in loose and unconsolidated topsoil. The area would be revegetated, which would have a beneficial impact on the soil stability. Revegetation activities in the Proposed Action Area would include broadcast seeding in fill areas and remedial planting in the marsh habitat. Soil would be stabilized upon revegetation. Impacts would be less than significant.

Alternative 5: Sinuous Channel Alternative

Zone B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

A sinuous channel and marsh would be created within Zone SG. Construction would include earthmoving activities such as excavating and grading. As under Alternative 4, mechanical disruption of the soil due to the grading required for these activities would result in unconsolidated topsoil which could increase short-term runoff and erosion potential. Also, the same as under Alternative 4, these areas would be revegetated, and upon revegetation the soils would be stabilized. Impacts would be less than significant.

3.3 Surface Water Quality

Affected Environment

The major sources of water for the Los Angeles River in the project vicinity are storm flows and nuisance flows from upstream tributaries and storm drain outfalls, and tertiary-treated effluent from the Tillman Water Reclamation Plant (WRP). The active channel of Haskell Creek is perennial due to discharge of reclaimed water from the Tillman WRP. The Tillman WRP treats about 40 million gallons per day and discharges approximately 17 million gallons per day of reclaimed water to 3 lakes: the Wildlife Lake, the Japanese Garden Lake, and Lake Balboa. All three lakes discharge into the Los Angeles River.

The Proposed Action Area is adjacent to the Los Angeles River and encompasses a portion of Haskell Creek. Both waterways are considered to be waters of the United States. Thus, discharges and discharges of fill are respectively subject to Section 401 and Section 404 of the Clean Water Act. Per the Los Angeles Regional Water Quality Control Board, the agency responsible for implementing Section 401, designated beneficial uses of the Los Angeles River in the Sepulveda Basin (Los Angeles River Reach 5) include: Municipal and Domestic Supply, Industrial Service Supply, Ground Water Recharge, Warm Freshwater Habitat, Wildlife Habitat, Wetland Habitat, Water Contact Recreation, and Non-contact Water Recreation (Corps 2013a).

The Los Angeles River routine base flow (usually less than 10 cubic feet per second) is typically high in salinity, whereas storm runoff is generally low in salinity. As the Proposed Action Area lies within the 10-year event elevation, it is often inundated by the overflow from the Los

Angeles River, which can deposit sediment and trash from upstream. The urban storm runoff entering the Sepulveda Dam Basin is generally of poor quality. Storm runoff and nuisance flows typically convey pollutants associated with urban development such as organic solvents, metals, surfactants, fecal matter, organic waste, pesticides, and fertilizers.

Significance Threshold

Impacts would be considered significant if the alternative:

- Causes a permanent violation of water quality standards or otherwise substantially degrade water quality

Environmental Consequences

Alternative 1: No Action Alternative

Activities would entail application of herbicides to non-native vegetation; annual mowing of all shrubs in Zone B and Zone Q; trimming of native trees in Zones B, Q, L, and SG to a height of 8 feet; periodic removal of non-native trees as needed and as resources permit; and maintenance of access roads and the dam operations zone.

The work would not violate water quality standards or otherwise substantially degrade water quality. All work would be located outside of waters of the US. There would be no presence of earth-moving machinery within active flows. With the exception of grading the existing access road, there would be no activities which would result in the movement of earthen material. There would be no impacts.

Alternative 2: Passive Management Alternative

Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. However, mowing in Zone B and brush cutting in Zone Q would occur once every three years allowing for additional growth of shrubs when compared to the No Action Alternative.

Impacts associated with maintenance activities would also be the same as those characterized under Alternative 1.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. Bowing and brush cutting would occur once every four years and would be rotated across Zones B1, B2, B3 and Q.

Impacts associated with maintenance activities would also be the same as those characterized under Alternative 1.

Alternative 4: South Marsh Alternative

Zone B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 1.

An approximately 4.6-acre marsh habitat would be established in Zone J, a sub-area of Zone B1 (see Figure 2-4). Though most construction activities would occur outside of waters of the US, construction would require installation of grade control structures as well as water intake and outlet structures within Haskell Creek. Earthwork within Haskell Creek would result in turbidity increases during construction. Excavators, bulldozers, and other earthmoving equipment may be used in or near Haskell Creek. As such, waters may come into contact with petroleum-based products such as lubricants, fuel, and hydraulic fluids. Construction areas would be isolated from flows to minimize water quality impacts. Structures within waters of the US would be chemically inert, and would consist of materials such as concrete or stone which would not leach contaminants into the water column. Backfill would consist of on-site substrate.

Structures within waters of the US would result in discharges of fill. Thus, compliance with Section 401 and Section 404 of the Clean Water Act would be required. With implementation of best management practices as well as terms and conditions of Section 401 Water Quality Certification, impacts to water quality would be avoided and minimized. Impacts would be less than significant.

Alternative 5: Sinuous Channel Alternative

Zone B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 1.

A sinuous channel and marsh would be created within Zone SG. Construction would include earthmoving activities such as excavating and grading. The majority of construction would occur in waters of the US. Construction would require installation of grade control structures throughout Haskell Creek. Excavators, bulldozers, and other earthmoving equipment may be used in or near Haskell Creek. As such, waters may come into contact with petroleum-based products such as lubricants, fuel, and hydraulic fluids. Construction areas would be isolated from flows to minimize water quality impacts. Structures within waters of the US would be chemically inert, and would consist of materials such as concrete or stone which would not leach contaminants into the water column. Backfill would consist of on-site substrate.

Structures within waters of the US would result in discharges of fill. Thus, compliance with Section 401 and Section 404 of the Clean Water Act would be required. With implementation of best management practices as well as terms and conditions of Section 401 Water Quality Certification, impacts to water quality would be avoided and minimized. Impacts would be less than significant.

3.4 Air Quality and Greenhouse Gases

Affected Environment

National Ambient Air Quality Standards

To protect the public health and welfare, the Federal government identified a number of criteria air pollutants and established ambient air quality standards through the Federal Clean Air Act for each. The air pollutants for which Federal standards have been promulgated via the National Ambient Air Quality Standards (NAAQS) include ozone (O3), carbon monoxide (CO), suspended particulate matter (PM), sulfur dioxide (SO2), nitrogen dioxide (NO2), and lead (Pb). PM emissions are regulated in two size classes: Particulates up to 10 microns in diameter (PM10) and particulates up to 2.5 microns in diameter (PM2.5).

A region is given the status of “attainment” or “unclassified” if the NAAQS have not been exceeded. A status of "nonattainment" for particular criteria pollutants is assigned if the NAAQS have been exceeded. Once designated as nonattainment, attainment status may be achieved after three years of data showing non-exceedance of the standard. When an area is reclassified from nonattainment to attainment, it is designated as a “maintenance area,” indicating the requirement to establish and enforce a plan to maintain attainment of the standard. Federal attainment status designations for the SCAB are summarized in Table 3-1.

General Conformity Rule

Section 176(c) of the federal Clean Air Act states that a federal agency cannot issue a permit for, or support an activity within, a nonattainment or maintenance area unless the agency determines it will conform to the most recent U.S. Environmental Protection Agency-approved State Implementation Plan (SIP). Thus, a federal action must not:

- Cause or contribute to any new violation of a NAAQS.
- Increase the frequency or severity of any existing violation.
- Delay the timely attainment of any standard, interim emission reduction, or other milestone.

A conformity determination is required for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by the federal action would equal or exceed rates specified in 40 C.F.R. 93.153.

TABLE 3-1
NAAQS ATTAINMENT DESIGNATIONS FOR THE SCAB AND APPLICABLE GENERAL CONFORMITY DE MINIMIS RATES

Pollutant	Attainment Status	General Conformity De Minimis Rates (tons/year)
Ozone	Nonattainment	10
Inhalable particulate matter (PM_{10})	Attainment/Maintenance	100
Fine particulate matter ($PM_{2.5}$)	Nonattainment	100
Carbon monoxide	Attainment/Maintenance	100
Nitrogen oxide	Attainment/Maintenance	100
Sulfur dioxide	Attainment	100
Lead	Nonattainment	25

Source: US EPA Green Book

The SCAB is currently in extreme nonattainment for ozone (precursors: VOC or NOx); nonattainment for PM2.5; attainment/maintenance for PM10; attainment/maintenance for NO2; and attainment/maintenance for CO; and nonattainment for lead. Based on the present attainment designation for the SCAB, a Federal action would conform to the SIP if annual emissions are below 100 tons of CO, PM2.5, PM10, or N02, 10 tons of VOC, or 25 tons of lead.

Regional Significance Thresholds

The South Coast Air Quality Management District (SCAQMD) has developed Regional Significance Thresholds (RSTs) for mass daily emission rates of criteria pollutants for both construction and operational sources. RSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or state ambient air quality standard in the SCAB.

TABLE 3-2
SCAQMD REGIONAL AIR QUALITY SIGNIFICANCE THRESHOLDS[1]

Pollutant	Construction Emission Thresholds (lbs/day)
Reactive Organic Gas (ROG or VOC[2])	75
Inhalable particulate matter (PM_{10})	150
Fine particulate matter ($PM_{2.5}$)	55
Carbon monoxide	550
Nitrogen oxide	100
Sulfur dioxide	150
Lead	3

1. Source: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2; 2., ROG and VOC are used interchangeably for the purpose of comparing to significance thresholds.

Emission Estimates Methodology

Emissions were estimated using on-road and off-road emission factors published by the SCAQMD.

Each of the action alternatives would require the same suite of on-road and off-road vehicles for vegetation management activities: two loaders, two dump trucks; two chippers; one water truck, and five pickup trucks. Most vegetation activities would be completed within a four week period. Five pickup trucks would make 60 mile round trips each work day. Vegetation not mulched on site would be transported over the dam and placed within a sediment storage site downstream of the dam.

Construction of the marsh and sinuous channel in Alternatives 4 and 5 would require the same suite of on-road and off-road vehicles: two excavators, two loaders, two dump trucks; two chippers; one water truck, and five pickup trucks. Excavated earth would be transported over the dam and placed within a sediment storage site downstream of the dam. Period of construction would be six months.

Estimates of lead emissions were not calculated. Lead emissions from mobile sources in California have significantly decreased due to the near elimination of lead in fuels. Thus, emission factors for lead are not available. Little to no quantifiable and foreseeable lead emissions would be generated by any of the alternatives.

Ozone (O3) formation is driven by two major classes of directly emitted precursors: nitrogen oxides (NOx) and volatile organic compounds (VOC). The relation between O3, NOx and VOC is driven by complex nonlinear photochemistry. Due to the variability in rates of ozone formation, there are no emission factors for ozone. Instead, the emissions associated with ozone precursors (i.e., ROG) are calculated and used as a surrogate for reporting ozone emissions.

Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are often called greenhouse gases (GHG). GHGs are emitted by natural processes and human activities. Examples of GHGs that are produced both by natural processes and industry include carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O). Currently, there are no Federal standards for GHG emissions and no Federal regulations have been set at this time, though the CEQ has issued draft guidance on the consideration of GHG emissions, entitled Revised Draft Guidance on the Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews, dated December 24, 2014, and published at 79 Federal Register 77801. This draft guidance establishes a recommended reference point of 25,000 metric tons of annual CO2 emissions as warranting further review.

Significance Threshold

Impacts would be considered significant if the alternative:

- Exceeds General Conformity Rule de minimis thresholds
- Exceeds any SCAQMD daily RSTs

Environmental Consequences

Alternative 1: No Action Alternative

Activities would entail application of herbicides to non-native vegetation; annual mowing of all shrubs in Zone B and Zone Q; trimming of native trees in Zones B, Q, L, and SG to a height of 8 feet; periodic removal of non-native trees as needed and as resources permit; and maintenance of access roads and the dam operations zone. Off-road emissions would include those from loaders and chippers operating 8 hours per day over a 25-day period. On-road emissions would include daily commutes for 5 pickup trucks and dump trucks operating within the Proposed Action Area.

As shown in Table 3-5 estimated annual emissions would not exceed the Clean Air Act General Conformity de minimis thresholds. As a result, a General Conformity Analysis would not be required. As shown in Table 3-6, GHG emissions would not exceed CEQ recommended reference point of 25,000 metric tons of annual CO2 emissions as warranting further review. As shown in Table 3-3 estimated emissions would not exceed daily SCAQMD emissions thresholds. Therefore, Alternative 1 would entail less than significant impacts to air quality. Fugitive emissions of PM2.5 and PM10 associated with the use of unpaved roads and material handling would be minimized through implementation best management practices such as watering unpaved roads within the Proposed Action Area.

TABLE 3-3
COMPARISON OF ESTIMATED DAILY EMISSIONS TO SCAQMD THRESHOLDS
ALTERNATIVES 1, 2 AND 3

Pollutant	Construction Emission Thresholds (lbs/day)	Estimated Emissions (lbs/day)
Reactive Organic Gas (ROG or VOC)	75	1.59
Inhalable particulate matter (PM_{10})	150	0.36
Fine particulate matter ($PM_{2.5}$)	55	0.32
Carbon monoxide	550	13.21
Nitrogen oxide	100	8.78
Sulfur dioxide	150	0.03

Alternative 2: Passive Management Alternative

Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. However, mowing in Zone B and brush cutting in Zone Q would occur once every three years allowing for additional growth of shrubs when compared to the No Action Alternative.

Due to the decrease in mowing frequency, impacts associated with maintenance activities would be less than those characterized under Alternative 1. Impacts would be less than significant.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. Bowing and brush cutting would occur once every four years and would be rotated across Zones B1, B2, B3 and Q.

Due to the decrease in mowing frequency, impacts associated with maintenance activities would be less than those characterized under Alternative 1. Impacts would be less than significant.

Alternative 4: South Marsh Alternative

Zone B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Due to the decrease in mowing frequency, impacts associated with maintenance activities would be less than those characterized under Alternative 1.

An approximately 4.6-acre marsh habitat would be established in Zone J, a sub-area of Zone B1 (see Figure 2-4). Construction would include earthmoving activities such as excavating and grading. Off-road emissions would include those from excavators and loaders operating 8 hours per day over a 6 month period. On-road emissions would include daily commutes for 5 pickup trucks and dump trucks operating within the Proposed Action Area.

As shown in Table 3-5 estimated annual emissions would not exceed the Clean Air Act General Conformity de minimis thresholds. As a result, a General Conformity Analysis would not be required. As shown in Table 3-6, GHG emissions would not exceed CEQ recommended reference point of 25,000 metric tons of annual CO2 emissions as warranting further review. As shown in Table 3-4 estimated emissions would not exceed daily SCAQMD emissions thresholds. Therefore, Alternative 1 would entail less than significant impacts to air quality. Fugitive emissions of PM2.5 and PM10 associated with the use of unpaved roads and material handling would be minimized through implementation best management practices such as watering unpaved roads within the Proposed Action Area.

TABLE 3-4
COMPARISON OF ESTIMATED DAILY EMISSIONS TO SCAQMD THRESHOLDS
ALTERNATIVES 4 AND 5

Pollutant	Construction Emission Thresholds (lbs/day)	Estimated Emissions (lbs/day)
Reactive Organic Gas (ROG or VOC[2])	75	3.62
Inhalable particulate matter (PM_{10})	150	0.74
Fine particulate matter ($PM_{2.5}$)	55	0.64
Carbon monoxide	550	30.30
Nitrogen oxide	100	17.46
Sulfur dioxide	150	0.03

Alternative 5: Sinuous Channel Alternative

Impacts under Alternative 5, the Sinuous Channel Alternative, would be similar to and potentially slightly greater than those under Alternative 4. Implementing Alternative 5 would not be expected to result in any violations of federal or state air quality standards or result in any significant adverse impacts on air quality.

TABLE 3-5
COMPARISON OF ESTIMATED ANNUAL EMISSIONS TO GENERAL CONFORMITY DE MIMIMIS THRESHOLDS

Pollutant	General Conformity De Minimis Rates (tons/year)	Alternatives 1, 2 and 3 (tons/year)	Alternatives 4 and 5 (tons/year)
Ozone (ROG,VOC)	10	0.018	0.25
Inhalable particulate matter (PM_{10})	100	0.004	0.051
Fine particulate matter ($PM_{2.5}$)	100	0.003	0.044
Carbon monoxide	100	0.15	2.09
Nitrogen oxide	100	0.10	1.2
Sulfur dioxide	100	<0.001	0.005
Lead	25	-	-

TABLE 3-6
COMPARISON OF ESTIMATED GHG EMISSIONS TO CEQ GHG GUIDANCE

Pollutant	Alternatives 1, 2 and 3 (tons/year)	Alternatives 4 and 5 (tons/year)
25,000	757	9,177

3.5 Noise

Noise can be defined as unwanted sound or combination of sounds that may interfere with conversation, work, rest, recreation, and sleep, or in the extreme may produce physiological or psychological damage. Sound travels from a source in the form of wave, which exerts a pressure on a receptor such as a human ear. The amount of pressure a sound wave exerts is referred to as sound level, commonly measured in decibels (dB). As a reference, a sound level of zero dB corresponds roughly to the threshold of human hearing, and a sound level in the range of 120 to 140 dB can produce human pain.

Sound has two main components to a human ear: pitch and loudness. While the pitch of a sound is generally associated with an annoyance, sound loudness can interfere with activities such as conversation, sleep, and learning, and can even have lasting physiological effects, such as hearing

loss. Those who are more sensitive to noise such as children and the elderly are at higher risk of being adversely affected by excessive noise levels. Table 3-3 lists some sources and effects associated with a typical range of noise levels.

TABLE 3-7
SOURCE AND EFFECTS OF COMMON NOISE LEVELS

Noise Level (dB)	Effects	Evidence	Source
130	Hearing Loss	Pain Threshold	Hard Rock Band
120		Deafening	Thunder
110			Jet Takeoff
100			Loud Auto Horn at 10 feet
90		Very Loud	Noisy City Street
85			
80			School Cafeteria
75			
70	Physiological Effects	Loud	Vacuum Cleaner at 10 feet
65			
60	Interference with Conversation		Normal Speech at 3 feet
55			
50	Sleep Interruption	Moderately Loud	Average Office Dishwasher in Next Room
45			
40	Sleep Disturbance		Soft Radio Music Quiet Residential Zone
35			
30		Faint	Interior of Average Residence
20			Average Whisper at 6 feet
10			Rustle of Leaves in Wind
5		Very Faint	Human Breathing
0		Hearing Threshold	

Noise can be one of the most widespread environmental pollutants affecting communities. Community noise, or environmental noise, varies continuously in any given Zone over a period of time depending on the contributing sound sources within and surrounding the area. Such community noise typically includes a combination of relatively stable background noise—where individual contributors are not identifiable—and the periodic addition of short duration noise sources such as aircraft flyovers, motor vehicles, or sirens. Some land uses can be considered more sensitive to community noise levels than others and are often referred to as sensitive receptors. These include residences, schools, hotels, hospitals, nursing homes, churches, libraries, and cemeteries. Shopping centers, commercial parks, strip malls, industrial Zones, and active recreation Zones can be considered less noise-sensitive receptors.

In addition, wildlife may be sensitive receptors to noise and vibrations. Wildlife rely on meaningful sounds for communication, navigation, avoiding danger and finding food. Noise may be defined for wildlife as any human or other exterior sound that alters the behavior of animals or interferes with their functioning. The level of disturbance may be qualified as damage, which may harm health, reproduction, survivorship, habitat use, distribution, abundance or genetic

distribution, or disturbance which causes a detectable change in behavior. Behavioral and physiological responses of wildlife to noise have the potential to cause injury, energy loss, decrease in food intake, habitat avoidance and abandonment, and reproductive losses.

Affected Environment

The Sepulveda Dam Basin is in the Encino Zone of San Fernando Valley, and is surrounded by an urban environment. Traffic is the primary source of noise in and near the Proposed Action Area. Interstate 405 borders the Proposed Action Area to the east and Burbank Boulevard borders it to the south. Noise from Burbank Boulevard varies throughout the day, being typically greater during early morning rush hour and late afternoon/early evening rush hour periods. Noise from Interstate 405 is limited to a very low background hum, if at all, depending on wind direction. Operation of the Van Nuys Airport, approximately 2.6 miles north of the Sepulveda Dam Basin, periodically contributes to the existing noise levels in the area. Sound measurements conducted in the area range from 50 A-weighted decibels (dB(A)) to 65 dB(A). Nesting birds may be present on site and in adjacent vegetation during bird nesting season. There are no human sensitive receptors such as schools, hospitals, or houses of worship near the Proposed Action Area.

Significance Threshold

Impacts would be considered significant if the alternative results in:

- A long term increase in noise levels above ambient noise levels by 5 dB(A).
- An increase in noise levels that may interfere with breeding behavior of migratory birds.

Environmental Consequences

Alternative 1: No Action Alternative

Activities would entail application of herbicides to non-native vegetation; annual mowing of all shrubs in Zone B and Zone Q; trimming of native trees in Zones B, Q, L, and SG to a height of 8 feet; periodic removal of non-native trees as needed and as resources permit; and maintenance of access roads and the dam operations zone. The work would require limited use of construction equipment. Equipment may include haul trucks, loaders, and tractors with articulated mowing attachments. Typical construction equipment generates noise levels ranging from approximately 76 to 88 dB(A) at a distance of 50 feet from the source. The temporary increase would occur yearly during annual operations and maintenance activities over an approximately four-week period.

Atmospheric attenuation of sound level is approximately 6 dB(A) for every doubling of distance from a noise source. Table 3-4 shows estimated sound levels at each doubling of distance from the center of the noise source based solely on atmospheric attenuation.

TABLE 3-8
ESTIMATED RANGES OF SOUND LEVELS AT VARIOUS DISTANCES

Distance from noise source (feet)	50	100	200	400	800
Estimated sound levels (dBA)	76 – 88	70 – 82	64 – 76	58 – 70	52 – 64

The geographic center of the Proposed Action Area is approximately 600 to 1,200 feet from the boundary. At a distance of 800 feet, the sound levels would range from approximately 52 dB(A) to 64 dB(A) and would not be distinguishable from ambient noise levels. Recreational users in the area at distances closer than 800 feet would be temporarily exposed to elevated noise levels. Noise levels would return to ambient levels upon completion of work.

The noise created during the implementation period would have no significant impact on migratory birds, as all work would be performed after 15 September and prior to 15 March (i.e., outside the migratory bird breeding season). No significant adverse impacts on noise conditions would occur under Alternative 1.

Alternative 2: Passive Management Alternative

Impacts under Alternative 2 would be similar to those characterized under Alternative 1.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1.

Alternative 4: South Marsh Alternative

Impacts under Alternative 4 would be similar to those characterized under Alternative 1; however, there would be a temporary increase in noise levels during construction of the marsh from the use of excavators, loaders, and bulldozers.

Alternative 5: Sinuous Channel Alternative

Impacts under Alternative 5 would be similar to those characterized under Alternative 1; however, there would be a temporary increase in noise levels during construction of the marsh from the use of excavators, loaders, and bulldozers.

3.6 Biological Resources

Affected Environment

Vegetation

Vegetation in the Sepulveda Dam Basin has been altered from its natural state by agriculture, urbanization, the construction of the dam and associated works, several periods of cyclic

droughts, natural and human-caused erosion, establishment of invasive (nonnative) plant species, and ongoing planting and maintenance of ornamental landscaping. Native vegetation Zones within the Basin are fragmented, degraded, and small in size (Corps 2012b). In late 2012, the Corps removed native and nonnative invasive species in an Zone south of Haskell Creek to improve flood control and public safety.

The *Baccharis pilularis* vegetation type is dominant to co-dominant in the shrub canopy with California sagebrush (*Artemisia californica*), lilacs (*Ceanothus* spp.), beaked hazel (*Corylus cornuta*), California buckwheat (*Eriogonum fasciculatum*), seaside woolly sunflower (*Eriophyllum staechadifoliu)*, silk tassel (*Garrya elliptica)*, deer weed (*Lotus scoparius)*, yellow bush lupine (*Lupinus arboreus)*, California blackberry (*Rubus ursinus)*, white sage (*Salvia apiana)*, and pitcher plant (*S. leucophylla)*. Shrubs are less than 3 meters in height, and the canopy is variable. The herbaceous layer is also variable.

The *Quercus* spp. vegetation type is a combination of the coast live oak (*Quercus agrifolia*) vegetation type and the valley oak vegetation type. Within the *Q. agrifolia* vegetation type, coast live oak is dominant or co-dominant in the tree canopy with maple (*Acer* spp.), pacific madrone (*Arbutus menziesii)*, California sycamore (*Platanus racemosa)*, Fremont's cottonwood (*Populus fremontii*), valley oak, and arroyo willow (*Salix lasiolepis)*. Trees are over 30 meters in height, and the canopy is open to continuous. The shrub layer is sparse to intermittent and the herbaceous layer is sparse or grassy. Within the *Q. lobata* vegetation type, the *Q. lobata* is dominant or co-dominant in the tree canopy with box elder (*Acer negundo*), Oregon ash (*Fraxinus latifolia*), California sycamore, Fremont's cottonwood, coast live oak, Gooding's willow (*Salix gooddingii*), and arroyo willow (*S. lasiolepis*). Trees are under 30 meters in height and the canopy is open to continuous. Shrubs are common to occasional and the herbaceous layer may be grassy.

The *Salix gooddingii* vegetation type is dominant or co-dominant in the tree canopy with Fremont's cottonwood, red willow (*Salix laevigata)*, arroyo willow, and black elderberry (*Sambucus nigra*). The shrub layer is intermittent to open and the herbaceous layer is variable.

The Proposed Action Areaalso includes ruderal lands and riverine habitat. Ruderal lands are Zones that have been substantially altered by maintenance or construction, causing them to be devoid of vegetation. Ruderal land is found near the dam as well as various access roads and trails throughout the Proposed Action Area.

Nonnative, invasive species such as black mustard (*Brassica nigra*), wild fennel (*Foeniculum vulgare*), poison oak (*Toxicodendron diversilobum*), and poison hemlock (*Conium maculatum*), a variety of nonnative grasses, and several species of nonnative trees (e.g., tree of heaven/Chinese sumac [*Ailanthus altissima*] and eucalyptus [*Eucalyptus* spp.]) are found in the Proposed Action Area. The Corps typically treats these invasive plants as well as any others that may be found in the Sepulveda Dam Basin (Corps 2014a).

Wildlife

Common wildlife near the project site include western fence and side-blotched lizards, squirrels, opossums, raccoons, and coyotes. Common birds include western scrub jay, Anna's

hummingbird, black phoebe, and California towhee. In addition, over 200 species of migratory and resident birds have been observed in the Sepulveda Basin Wildlife Reserve and using other patches of habitat such as riparian corridors supported by the Los Angeles River and Haskell Creek

Previous agricultural use in the Sepulveda Basin has historically limited its ability to support a diverse population of non-avian wildlife. Over time, however, mammals, reptiles, amphibians, and fish have been found within the Sepulveda Basin Wildlife Reserve. Small mammals, mostly rodents such as squirrels, field mice, and rabbits, roam the area. Raccoons, coyotes, and feral cats and dogs also frequent the area.

Several species of frogs and a variety of fish are found along the Los Angeles River and surrounding creeks and ponds. Altered seasonal flows and existing barriers to fish passage severely limit fish presence in the Sepulveda Dam Basin. Common nonnative species that may inhabit the Sepulveda Dam Basin include largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), western mosquito fish (*Gambusia affinis*), channel catfish (*Ictalurus punctatus*), fathead minnow (*Pimephales promelas*), common carp (*Cyprinus carpio*), and goldfish (*Carassius auratus auratus*; Corps 2012b).

Several species of bats have been observed near the Sepulveda Basin. The silver-haired bat (*Lasionycteris noctivagans*) is among the most common bat in forested Zones of the United States. They are a solitary, tree-roosting species, which feeds on insects. Hoary bats (*Lasiurus cinereus*) are the most widespread North American bat. They have been observed northeast of the Sepulveda Basin. They are a solitary species, which consumes mainly moths and other insects. The pallid bat (*Antrozous pallidus*) has been observed southwest of the Proposed Action Area. These bats are found in regions with rocky outcroppings or open, sparsely vegetated grasslands. Water must be available close by, and they can be found in different roosts for day, night, and hibernation.

Endangered Species

No Federally listed taxa have been located within the proposed project area (surveyed in summer 2011, summer 2012, summer 2013, and summer/winter 2014, summer/fall 2015), nor is the area designated as critical habitat for any Federally listed taxa. Therefore, the Proposed Action would not affect Federally endangered species and would be in compliance with the Endangered Species Act.

Significance Threshold

Impacts would be considered significant if the alternative:

- Create substantial loss of species diversity in natural vegetation and wildlife habitat.

Environmental Consequences

Alternative 1: No Action Alternative

Vegetation

Vegetation management activities under Alternative 1, the No Action Alternative, would result in herbicide treatment of nonnative shrubs and herbs in Zone B, Zone Q, Zone L, and Zone SG. Native and non-native shrubs in Zone B and Zone Q would be annually mowed to a height of approximately 3 feet. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. Access roads and dam operation Zones would be maintained. There would be no permanent loss of native species from the Proposed Action Area. Mowed native shrubs are expected to resume growth. The loss of nonnative species would allow for growth of native species. With the exception of the understory of trees that would be pruned to a height of 8 feet, the existing habitat structure would be maintained. Thus, the diversity of native species and wildlife habitat would be maintained. Impacts would be less than significant.

Wildlife

Annual mowing and mulching of invasive and other nonnative plant species in the Proposed Action Area would cause wildlife to temporarily abandon the immediate maintenance zone due to noise and vibration as well as the presence of humans and machinery. However, the abandoned Zones would be reoccupied upon completion of work. The remaining vegetative cover in the Proposed Action Area would provide cover and foraging for small mammals, and foraging for birds. In order to minimize impacts to birds during the nesting season, mowing, mulching, and non-native tree removal operations would be undertaken outside of the bird nesting and breeding season. Impacts would be less than significant.

Alternative 2: Passive Management Alternative

Vegetation

Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. However, mowing in Zone B and brush cutting in Zone Q would occur once every three years allowing for additional growth of shrubs when compared to the No Action Alternative. There would be no permanent loss of native species from the Proposed Action Area. Mowed native shrubs are expected to resume growth. The loss of nonnative species would allow for growth of native species. With the exception of the understory of trees that would be pruned to a height of 8 feet, the existing habitat structure would be maintained. Thus, the diversity of native species and wildlife habitat would be maintained. Impacts would be less than significant.

Wildlife

Impacts to wildlife during vegetation management activities would result in an impact similar to those characterized under the No Action Alternative. However, with brush cutting limited to once every three years, disturbances from noise and vibration as well as the presence of

humans and machinery would be limited. Furthermore, functions and services provided by the brush to wildlife such as cover would be would be maintained for a longer period of time. Impacts would be less than significant.

Alternative 3: Phased Mowing Alternative

Vegetation

Impacts under Alternative 3, the Phased Mowing Alternative, would be similar to those under Alternative 2. Vegetation management activities would be similar, but mowing and brush cutting would occur once every four years and would be rotated across Zones B1, B2, B3 and Q. Thus, there would be shrubs at 1, 2, 3, and 4-year growth levels at any point in time. Shrubs at a 4-year growth level would be continuously present across Zones B1, B2, B3 and Q. There would be no permanent loss of native species from the Proposed Action Area. Mowed native shrubs are expected to resume growth. The loss of nonnative species would allow for growth of native species. With the exception of the understory of trees that would be pruned to a height of 8 feet, the existing habitat structure would be maintained. Thus, the diversity of native species and wildlife habitat would be maintained. Impacts would be less than significant.

Wildlife

Maintenance activities in the Proposed Action Area would cause wildlife to temporarily abandon the immediate maintenance Zone due to noise and vibration as well as the presence of humans and machinery. However, the abandoned Zones would be reoccupied upon completion of work. Impacts from maintenance activities would be reduced compared to the No Action Alternative since brush cutting and mowing would be limited to once every four years and would be rotated across Zones B1, B2, B3 and Q. Thus, disturbances from noise and vibration as well as the presence of humans and machinery would be limited. The remaining vegetative cover in the Proposed Action Area would provide cover and foraging for small mammals, and foraging for birds. In order to minimize impacts to birds during the nesting season, mowing, mulching, and non-native tree removal operations would be undertaken outside of the bird nesting and breeding season. Impacts would be less than significant.

Alternative 4: South Marsh Alternative

Vegetation

Zone B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts to vegetation associated with maintenance activities would also be the same as those characterized under Alternative 3.

An approximately 4.6-acre marsh habitat would be established in Zone J, a sub-area of Zone B1 (see Figure 2-4). The *Bacharis pilularis* vegetation and non-native vegetation would be removed from Zone J. Elevation of the area would be lowered and *Juncus acutus* vegetation would be planted to create a marsh habitat. Thus, *Bacharis pilularis* vegetation within Zone J would be replaced by *Juncus acutus*. *Bacharis pilularis* vegetation would continue to be maintained within

Zones B1, B2, and the outer perimeter of Zone B3. However, Alternative 4 would increase diversity of native vegetation. Impacts would be less than significant.

Wildlife

Maintenance and marsh construction activities in the Proposed Action Area would cause wildlife to temporarily abandon the immediate maintenance Zone due to noise and vibration as well as the presence of humans and machinery. However, the abandoned Zones would be reoccupied upon completion of work. Impacts from maintenance activities would be reduced compared to the No Action Alternative since brush cutting and mowing would be limited to once every four years and would be rotated across Zones B1, B2, B3 and Q. Thus, disturbances from noise and vibration as well as the presence of humans and machinery would be limited. The remaining vegetative cover in the Proposed Action Area would provide cover and foraging for small mammals, and foraging for birds. In order to minimize impacts to birds during the nesting season, mowing, mulching, and non-native tree removal operations would be undertaken outside of the bird nesting and breeding season. Impacts would be less than significant.

Alternative 5: Sinuous Channel Alternative

Vegetation

Zone B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts to vegetation associated with maintenance activities would also be the same as those characterized under Alternative 3.

A sinuous channel and marsh would be created within Zone SG. The existing, broad arch-like alignment of Haskell Creek would be modified to a sinuous channel with terraces constructed to support *Schenoplectus californicus* and *Juncus acutus.* Thus, mixed riparian forest which line the Haskell Creek corridor would be replaced with wetland and marsh vegetation. A mixture of native (Goodding's black willow and Fremont cottonwood) and non-native (tropical ash) would be removed. However, approximately 60% of the trees within the corridor are non-native tropical ash trees. Furthermore, native black willow and cottonwood trees are present throughout riparian corridors within Sepulveda Basin. Thus, Alternative 5 would increase diversity of native species within the Proposed Action Area. Impacts would be less than significant.

Wildlife

Impacts to wildlife associated with maintenance activities would be similar to those characterized for Alternative 4. Construction of the sinuous channel would result in removal of the mixed riparian forest within the Haskell Creek corridor. A mixture of native (Goodding's black willow and Fremont cottonwood) and non-native (tropical ash) would be removed. Shade and perches associated with trees would no longer be available. The removal would cause birds that may periodically utilize the trees in the corridor to other Zones within the Sepulveda Basin where mixed riparian forest are present: North Wildlife Reserve; Los Angeles River (upstream of Burbank Blvd); and Encino Creek. Upon completion of construction, the marsh and wetland habitats would continue to provide foraging habitat within the aquatic habitat. The change in

habitat would afford additional benefits for all wildlife in the area. Impacts would be less than significant.

3.7 Cultural Resources

Affected Environment

The area of potential effects for the project is land directly or indirectly impacted and includes the 48-acre Proposed Action Area shown in Figure 1-1. The Proposed Action Area was disturbed during construction of Sepulveda Dam. Subsequent to completion of the dam, the area was used for agriculture. Furthermore, with repeated impoundment of water behind the dam, sediment from the upper reaches of the drainage area is deposited within the area. Haskell Creek was excavated from the uplands to convey storm flows into the Los Angeles River. Thus, the Proposed Action Area has a history of high disturbance to such degree that no surficial cultural resources could remain. No historic resources listed on or eligible for the National Register of Historic Places are known to be present within the APE. The entire Sepulveda Dam basin, including the Proposed Action Area was surveyed by Pat Martz (1977), who surveyed all undeveloped areas. She noted at the time that the cultivated fields were difficult to examine thoroughly because of the vegetation but that they were situated in low floodplain areas and that the areas have a low potential for cultural resources based on prior studies and field data.

Significance Threshold

Impacts would be considered significant if the alternative results in:

- The removal or destruction of prehistoric cultural resources.

Environmental Consequences

Alternative 1: No Action Alternative

Activities would entail application of herbicides to non-native vegetation; annual mowing of all shrubs in Zone B and Zone Q; trimming of native trees in Zones B, Q, L, and SG to a height of 8 feet; periodic removal of non-native trees as needed and as resources permit; and maintenance of access roads and the dam operations zone. Vegetation management activities would result in minimal surficial ground disturbance. Maintenance of access roads and the dam operations zone would require surficial ground disturbing activities such as resurfacing with decomposed granite or regrading roads. However, those impacts would be limited to established roads. Furthermore, the Proposed Action area has a history of high disturbance to such degree that no surficial cultural resources could remain. Thus, there would be no effects to cultural resources. Impacts would be less than significant.

Alternative 1 would constitute an undertaking as defined in 36 C.F.R. § 800.16(y). However, the Corps has determined that implementation of the undertaking would have no effect on historic properties. The Corps will undergo Section 106 consultation with the State Historic

Preservation Officer regarding this determination. Upon completion of the Section 106 consultation process, Alternative 1 would be in compliance with the National Historic Preservation Act.

Alternative 2: Passive Management Alternative

Impacts under Alternative 2 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. However, mowing in Zone B and brush cutting in Zone Q would occur once every three years allowing for additional growth of shrubs when compared to the No Action Alternative. Thus, the frequency of surficial surface disturbance associated with mowing and brush clearing activities would be reduced to once every three years. Furthermore, the Proposed Action area has a history of high disturbance to such degree that no surficial cultural resources could remain. Thus, there would be no effects to cultural resources. Impacts would be less than significant.

Alternative 2 would constitute an undertaking as defined in 36 C.F.R. § 800.16(y). However, the Corps has determined that implementation of the undertaking would have no effect on historic properties. The Corps will undergo Section 106 consultation with the State Historic Preservation Officer regarding this determination. Upon completion of the Section 106 consultation process, Alternative 2 would be in compliance with the National Historic Preservation Act.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. Bowing and brush cutting would occur once every four years and would be rotated across Zones B1, B2, B3 and Q. Thus, the frequency of potential surface disturbance associated with mowing and brush clearing activities would be reduced to once every four years and potential disturbances would be rotated across Zones B1, B2, B3 and Q. Furthermore, the Proposed Action area has a history of high disturbance to such degree that no surficial cultural resources could remain. Thus, there would be no effects to cultural resources. Impacts would be less than significant.

Alternative 3 would constitute an undertaking as defined in 36 C.F.R. § 800.16(y). However, the Corps has determined that implementation of the undertaking would have no effect on historic properties. The Corps will undergo Section 106 consultation with the State Historic Preservation Officer regarding this determination. Upon completion of the Section 106 consultation process, Alternative 3 would be in compliance with the National Historic Preservation Act.

Alternative 4: South Marsh Alternative

Zone B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

An approximately 4.6-acre marsh habitat would be established in Zone J, a sub-area of Zone B1 (see Figure 2-4). Construction would include earthmoving activities such as excavating and

grading. These activities could potentially unearth buried cultural resources. In the event that cultural resources are unearthed during ground-disturbing activities, CUL-1 would be implemented. With implementation of CUL-1, there would be no significant impacts to cultural resources.

Alternative 4 would constitute an undertaking as defined in 36 C.F.R. § 800.16(y). However, the Corps has determined that implementation of the undertaking would have no effect on historic properties. The Corps will undergo Section 106 consultation with the State Historic Preservation Officer regarding this determination. Upon completion of the Section 106 consultation process, Alternative 4 would be in compliance with the National Historic Preservation Act.

Alternative 5: Sinuous Channel Alternative

Zone B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

A sinuous channel and marsh would be created within Zone SG. The existing, broad arch-like alignment of Haskell Creek would be modified to a sinuous channel with terraces constructed to support *Schenoplectus californicus* and *Juncus acutus.* Construction would include earthmoving activities such as excavating and grading. These activities could potentially unearth buried cultural resources. In the event that cultural resources are unearthed during ground-disturbing activities, CUL-1 would be implemented. With implementation of CUL-1, there would be no significant impacts to cultural resources.

Alternative 5 would constitute an undertaking as defined in 36 C.F.R. § 800.16(y). However, the Corps has determined that implementation of the undertaking would have no effect on historic properties. The Corps will undergo Section 106 consultation with the State Historic Preservation Officer regarding this determination. Upon completion of the Section 106 consultation process, Alternative 5 would be in compliance with the National Historic Preservation Act.

Environmental Commitments

- CUL-1: If human remains or other sensitive cultural resources are unearthed during earthmoving activities, earthmoving activities shall cease and the Corps archaeologist shall be contacted. The Corps archaeologist shall evaluate the findings and coordinate with the State Historic Preservation Officer or Native American tribes as appropriate. Earthmoving activities shall not resume until coordination with appropriate regulatory agencies has been completed.

3.8 Hazardous Waste and Materials

Affected Environment

According to the California Department of Toxic Substances Control's EnviroStor database, there are no hazardous, toxic, or radioactive material sites within the Proposed Action Area.

Significance Threshold

A significant impact would occur if the proposed action would:

- Result in long-term exposure of humans, wildlife, wildlife habitat, and the general environment to hazardous materials.

Environmental Consequences

Alternative 1: No Action Alternative

Maintenance activities would not result in use or storage of materials classified as hazardous, toxic, or radioactive material sites under Comprehensive Environmental Response, Compensation, and Liability Act or the Resource Conservation and Recovery Act within the Proposed Action Area. There would be no impacts.

Alternative 2: Passive Management Alternative

Impacts under Alternative 2 would be similar to those characterized under Alternative 1.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1.

Alternative 4: South Marsh Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1.

Alternative 5: Sinuous Channel Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1.

3.9 Aesthetic Quality

Affected Environment

Primary visual elements in the vista within the Proposed Action Area include:

- An open and expansive landscape with beige, brown, green, and olive hues as well as heterogeneous textures associated with a vegetated landscape.
- Linear lines, sharp angles and other geometric forms as well as industrial colors and textures associated with the Sepulveda Dam, Burbank Blvd., Interstate 405 Freeway, and the concrete-lined embankments of the Los Angeles River.

Significance Threshold

Impacts would be considered significant if the alternative:

- Substantially alters the existing vista.

Environmental Consequences

Alternative 1: No Action Alternative

Activities would entail application of herbicides to non-native vegetation; annual mowing of all shrubs in Zone B and Zone Q; trimming of native trees in Zones B, Q, L, and SG to a height of 8 feet; periodic removal of non-native trees as needed and as resources permit; and maintenance of access roads and the dam operations zone. Annual mowing in Zone B would produce a uniform 3-foot high shrub layer. However, impacts would be temporary since regrowth would restore visual heterogeneity associated with shrub vegetation. Primary visual elements in the vista within the Proposed Action Area would remain unchanged. Impacts would be less than significant.

Alternative 2: Passive Management Alternative

Impacts under Alternative 2 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. However, mowing in Zone B and brush cutting in Zone Q would occur once every three years allowing for additional growth of shrubs when compared to the No Action Alternative. Thus, the frequency of disturbance to the vista associated with mowing and brush clearing activities would be reduced to once every three years. Impacts would be less than significant.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. Bowing and brush cutting would occur once every four years and would be rotated across Zones B1, B2, B3 and Q. Thus, the frequency of disturbance to the vista associated with mowing and brush clearing activities would be reduced to once every three years and would be rotated across Zones B1, B2, B3 and Q. Impacts would be less than significant.

Alternative 4: South Marsh Alternative

Zones B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

An approximately 4.6-acre marsh habitat would be established in Zone J, a sub-area of Zone B1 (see Figure 2-4). Construction would include earthmoving activities such as excavating and grading. Presence of earthmoving equipment within an open, disturbed area would result in temporary impacts during construction. The area will be subsequently vegetated with *Juncus acutus*. Upon establishment and growth, the overlapping circular outlines associated with *Bacharis pilularis* would be replaced by radiating striations associated with *Juncus acutus.* Alternative 4 would add diversity to the hues and textures within the existing vista. Impacts would be less than significant.

Alternative 5: Sinuous Channel Alternative

Zone B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

A sinuous channel and marsh would be created within Zone SG. The mixed riparian forest along the Haskell Creek corridor would be replaced with *Schenoplectus californicus* and *Juncus acutus*. Construction would include earthmoving activities such as excavating and grading. Presence of earthmoving equipment within an open, disturbed area would result in temporary impacts during construction. Upon establishment and growth, the tree line which forms a visual boundary between the Proposed Action Area and the vegetated area to the north of Haskell Creek would be replaced by low growing marsh and wetland plants. The vista would merge with the vegetated area north of Haskell Creek. The removal of the tree line would be a notable change. However, the diversity of hues and textures associated with a vegetated environment would be retained. Impacts would be less than significant.

3.10 Recreation Resources

Affected Environment

The approximately 48-acre area between Burbank Boulevard and Sepulveda Dam is designated as a Vegetation Management Area pursuant to the Sepulveda Dam Basin Master Plan. Furthermore, this area is not out-granted for other uses including recreation use and access is restricted to authorized personnel. However, the presence of native and non-native vegetation within the area over time has resulted in use of the area for recreation such as nature walks and bird watching. An existing tunnel beneath Burbank Blvd. as well as vehicle entrances facilitate access to the Proposed Action Area.

Significance Threshold

Impacts would be considered significant if the alternative:

- Permanently prohibit or disrupt existing recreational uses.

Environmental Consequences

Alternative 1: No Action Alternative

Activities would entail application of herbicides to non-native vegetation; annual mowing of all shrubs in Zone B and Zone Q; trimming of native trees in Zones B, Q, L, and SG to a height of 8 feet; periodic removal of non-native trees as needed and as resources permit; and maintenance of access roads and the dam operations zone. Sections of the maintenance road and/or portions of various zones may be temporarily closed for a few days during annual maintenance activities. Areas outside of the immediate work zone would remain accessible during maintenance activities. Upon completion of work, the entire Proposed Action Area would be accessible for recreational users. Impacts would be less than significant.

Alternative 2: Passive Management Alternative

Impacts under Alternative 2 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. However, mowing in Zone B and brush cutting in Zone Q would occur once every three years allowing for additional growth of shrubs when compared to the No Action Alternative. Thus, the frequency of disturbance to recreation associated with mowing and brush clearing activities would be reduced to once every three years. Impacts would be less than significant.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. Bowing and brush cutting would occur once every four years and would be rotated across Zones B1, B2, B3 and Q. Thus, the frequency of disturbance to recreation associated with mowing and brush clearing activities would be reduced to once every three years and would be rotated across Zones B1, B2, B3 and Q. Impacts would be less than significant.

Alternative 4: South Marsh Alternative

Zones B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

An approximately 4.6-acre marsh habitat would be established in Zone J, a sub-area of Zone B1 (see Figure 2-4). Construction would include earthmoving activities such as excavating and grading. Public access in the vicinity of Zone B1 would be limited for the duration of construction. Public access would be restored upon completion of construction. Impacts would be less than significant.

Alternative 5: Sinuous Channel Alternative

Zone B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

A sinuous channel and marsh would be created within Zone SG. Construction would include earthmoving activities such as excavating and grading. Public access in the vicinity of Zone SG would be limited for the duration of construction. Public access would be restored upon completion of construction. Impacts would be less than significant.

3.11 Public Health and Safety

Affected Environment

Prior to December 2012, the Proposed Action Area had been generally heavily vegetated. Unchecked growth of nonnative invasive plants in the interior of the Proposed Action Area provided dense cover for a variety of unauthorized activities including encampments. The range of unauthorized activities include lewd activities and drug dealing. Walkers and joggers who use the maintenance roads through the area reported mugging incidents. Corps personnel have also been threatened. In addition, the presence of unauthorized encampments has resulted in accidental fires. The density and robust growth of vegetation also impeded emergency responses to the area resulting in at least one death.

Significance Threshold

Impacts would be considered significant if the alternative:

- Substantially increases safety risks for the general public.

Environmental Consequences

Alternative 1: No Action Alternative

Annual mowing of all shrubs in Zone B and Zone Q to a height of 3 feet; trimming of native trees in Zones B, Q, L, and SG to a height of 8 feet; periodic removal of non-native trees as needed and as resources permit would discourage unauthorized encampments and establish a line of sight across the Proposed Action Area. The potential for human-caused fires would be reduced. Maintenance of access roads and the dam operations zone would improve safety vehicles and pedestrians who use the roads. Safety risks would be reduced. Impacts would be beneficial and less than significant.

Alternative 2: Passive Management Alternative

Impacts under Alternative 2 would be similar to those characterized under Alternative 1.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1.

Alternative 4: South Marsh Alternative

Impacts associated with maintenance activities would also be the same as those characterized under Alternative 1.

An approximately 4.6-acre marsh habitat would be established in Zone J, a sub-area of Zone B1 (see Figure 2-4). Construction would include earthmoving activities such as excavating and grading. Hazards would be present within the vicinity of the work area during construction. However, public access in the vicinity of Zone B1 would be limited for the duration of

construction through signage, barriers, and fencing. Thus, any temporary increases in safety risks would be attenuated. Impacts would be less than significant.

Alternative 5: Sinuous Channel Alternative

Impacts associated with maintenance activities would also be the same as those characterized under Alternative 1.

A sinuous channel and marsh would be created within Zone SG. Construction would include earthmoving activities such as excavating and grading. Hazards would be present within the vicinity of the work area during construction. However, public access in the vicinity of Zone B1 would be limited for the duration of construction through signage, barriers, and fencing. Thus, any temporary increases in safety risks would be attenuated. Impacts would be less than significant.

3.12 Socioeconomics and Environmental Justice

Each federal agency is required, by Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations . . ."

The Council on Environmental Quality (CEQ) defines a minority population as any group of minorities that exceeds 50 percent of the existing population within the market Zone or where a minority group comprises a meaningfully greater percentage of the local population than in the general population. Additionally, the CEQ identifies low income using 2000 census data for "individuals living below the poverty level."

Ensuring environmental justice means protecting existing local and minority and low-income populations from disproportionate adverse human health or environmental effects related to federal government action.

Affected Environment

The communities surrounding the Sepulveda Dam Basin are largely white (including Sherman Oaks and Encino) with the communities of Van Nuys and Lake Balboa having a large Hispanic population. Household income suggests more affluent communities south of the Los Angeles River compared to Van Nuys and Lake Balboa, north of the Sepulveda Dam Basin (Corps 2012a). Table 3-5 displays the demographics of the county and city of Los Angeles.

TABLE 3-5
DEMOGRAPHICS OF THE AREA

	County of Los Angeles	City of Los Angeles
Race (2013 ACS 5-year population estimate)		
African American	833,477	357,932
American Indian/Alaska Native	51,849	20,424
Asian	1,372,726	434,946
Hispanic or Latino	4,741,492	3,827,261
Mixed Race	368,478	129,081
Native Hawaiian/Other Pacific Islander	26,132	6,924
White	5,277,461	3,698,180
Household Income (past 12 months)		
Less than $10,000	209,050	106,678
$10,000 – $14,999	190,300	94,255
$15,000 – $24,999	341,120	155,302
$25,000 – $34,999	310,181	136,813
$35,000 – $49,000	410,856	172,578
$50,000 – $74,999	545,369	212,788
$75,000 – $99,000	384,881	139,576
$100,000 – $149,999	437,818	153,261
$150,000 – $199,999	189,195	64,932
$200,000 or more	211,613	84,777
Poverty	-	22.1%

Source: U.S Census Bureau 2013

Demographics for the City of Los Angeles are used as the reference demographics under environmental justice. The demographics of visitors to the Sepulveda Dam Basin are assumed to reflect the demographics of communities adjacent to the Sepulveda Dam Basin (Corps 2011a).

Significance Threshold

Impacts would be considered significant if the alternative results in:

- Disproportionately high and adverse impacts on minorities, low-income residents, or children
- A substantial shift in population, housing, and employment.

Environmental Consequences

Alternative 1: No Action Alternative

Activities would entail application of herbicides to non-native vegetation; annual mowing of all shrubs in Zone B and Zone Q; trimming of native trees in Zones B, Q, L, and SG to a height of 8 feet; periodic removal of non-native trees as needed and as resources permit; and maintenance

of access roads and the dam operations zone. The Corps' operations and maintenance staff would do the majority of work. While some vegetation management activities such as mowing would likely be contracted to an outside source by the Corps, the economic effects would be negligible. The maintenance work would not result in direct or indirect adverse environmental impacts. The work would not require additional housing for laborers since the project is readily within commuting distance from most parts of Los Angeles County. Furthermore, the work would not entail the construction of infrastructure or utilities that would result in growth of the surrounding area, nor would the work increase capacity of existing infrastructure that would induce growth. The work would not lead to a substantial shift in population, housing, and employment. Impacts would be less than significant.

Alternative 2: Passive Management Alternative

Impacts under Alternative 2 would be similar to those characterized under Alternative 1.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1.

Alternative 4: South Marsh Alternative

Impacts under Alternative 4 would be similar to those characterized under Alternative 1.

Alternative 5: Sinuous Channel Alternative

Impacts under Alternative 5 would be similar to those characterized under Alternative 1.

3.13 Traffic and Transportation

Affected Environment

The Sepulveda Dam Basin is in the northwest quadrant of the intersection of Interstate 405 and U.S. Highway 101. Access into the Sepulveda Dam Basin can be attained via main entrances along Woodley Avenue from the north, Burbank Boulevard (which runs along the southern portion of the Sepulveda Dam Basin) from the east or west, Balboa Boulevard from the west, or from Victory Boulevard from the north. Average daily traffic volumes of these roadways are shown in Table 3-6.

TABLE 3-6
ROADWAYS AND TRAFFIC VOLUMES

Roadway Name	Average Daily Two-way Traffic (in thousands of cars)	Roadway Designation
Interstate 405	264,000	Freeway
U.S. Route 101	211,000	Freeway
Victory Boulevard	171,000	Arterial
Balboa Boulevard	300,000	Arterial
Burbank Boulevard	187,500	Arterial

Source: Caltrans 2013

A maintenance road is at the toe of the dam on the upstream side. The road turns west and runs parallel to Burbank Boulevard toward Haskell Creek, turning southwest and parallel to the creek toward the Los Angeles River, and circles back toward the dam. The road is often used by walkers and joggers coming from the sidewalk along Burbank Boulevard or through the tunnel under Burbank Boulevard from the Sepulveda Basin Wildlife Reserve on the north side of Burbank Boulevard. There is no through traffic in the Proposed Action Area.

Significance Threshold

Impacts would be considered significant if the alternative:

- Substantially increases traffic levels.

Environmental Consequences

Alternative 1: No Action Alternative

Activities would entail application of herbicides to non-native vegetation; annual mowing of all shrubs in Zone B and Zone Q; trimming of native trees in Zones B, Q, L, and SG to a height of 8 feet; periodic removal of non-native trees as needed and as resources permit; and maintenance of access roads and the dam operations zone. The Corps' operations and maintenance staff would do the majority of work. During the mobilization phase, crews would transport approximately three to four earthmoving equipment such as backhoes, loaders, dozers, or excavators to the Proposed Action Area from the base yard in El Monte, California. In addition, approximately two to three on-road dump trucks would be driven from the base yard. Dump trucks and earthmoving equipment would remain on site until completion of work. A five to ten member crew would commute daily from the base yard to the worksite in pickup trucks. For the most part, vegetation would not be hauled off-site. Instead, vegetation would be chipped and spread on site. All earthmoving equipment and dump trucks would be returned to base yard during the demobilization phase. During mobilization and demobilization periods when the number of work vehicles are expected to peak, approximately fifteen additional vehicles would

be on regional and local roadways. The addition of fifteen vehicles for a temporary duration to roadways would not substantially increase traffic levels. Impacts would be less than significant.

Alternative 2: Passive Management Alternative

Impacts under Alternative 2 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. However, mowing in Zone B and brush cutting in Zone Q would occur once every three years allowing for additional growth of shrubs when compared to the No Action Alternative. Thus, the frequency traffic impacts associated with mowing and brush clearing activities would be reduced to once every three years. Impacts would be less than significant.

Alternative 3: Phased Mowing Alternative

Impacts under Alternative 3 would be similar to those characterized under Alternative 1. Native trees in Zones B, Q, L, and SG would be pruned to a height of 8 feet. Non-native trees would be removed. Bowing and brush cutting would occur once every four years and would be rotated across Zones B1, B2, B3 and Q. Thus, the frequency of traffic impacts associated with mowing and brush clearing activities would be reduced to once every three years. Impacts would be less than significant.

Alternative 4: South Marsh Alternative

Zones B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

An approximately 4.6-acre marsh habitat would be established in Zone J, a sub-area of Zone B1 (see Figure 2-4). Construction would include earthmoving activities such as excavating and grading. Construction would require the same suite of equipment required for ongoing maintenance activities under the No Action Alternative. The duration of on-site use would be approximately six months. Excavated material from Zone J would not be hauled off-site. Instead, excavated earth would be transported over the dam and placed within a sediment storage site downstream of the dam. During mobilization and demobilization periods when the number of work vehicles are expected to peak, approximately fifteen additional vehicles would be on regional and local roadways. The addition of fifteen vehicles for a temporary duration to roadways would not substantially increase traffic levels. Impacts would be less than significant.

Alternative 5: Sinuous Channel Alternative

Zone B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

A sinuous channel and marsh would be created within Zone SG. Construction would include earthmoving activities such as excavating and grading. Construction would require the same suite of equipment required for ongoing maintenance activities under the No Action Alternative. The duration of on-site use would be approximately six months. Excavated material from Zone

SC would not be hauled off-site. Instead, excavated earth would be transported over the dam and placed within a sediment storage site downstream of the dam. During mobilization and demobilization periods when the number of work vehicles are expected to peak, approximately fifteen additional vehicles would be on regional and local roadways. Uhe addition of fifteen vehicles for a temporary duration to roadways would not substantially increase traffic levels. Impacts would be less than significant.

3.14 Utilities

Affected Environment

Utilities generally provided to the area include electricity, natural gas, telephone, water, and sewer and storm drain facilities. A sewer line crosses under the Proposed Action Area from the northwestern corner between the Los Angeles River and Woodley Avenue, continuing southeastward under Haskell Creek and under the dam (Corps 2012a).

Significance Threshold

Impacts would be considered significant if the alternative:

- Causes substantial modification or relocation of utilities resulting in long-term or widespread disruption of service.

Environmental Consequences

Alternative 1: No Action Alternative

There would be no impacts on the existing sewer line in the Proposed Action Area since maintenance activities would not involve excavation or other earthmoving activities.

Alternative 2: Passive Management Alternative

There would be no impacts on the existing sewer line in the Proposed Action Area since maintenance activities would not involve excavation or other earthmoving activities.

Alternative 3: Phased Mowing Alternative

There would be no impacts on the existing sewer line in the Proposed Action Area since maintenance activities would not involve excavation or other earthmoving activities.

An approximately 4.6-acre marsh habitat would be established in Zone J, a sub-area of Zone B1 (see Figure 2-4). Construction would include earthmoving activities such as excavating and grading. Standard procedures for locating and avoiding utilities would be implemented during the design and construction phases to avoid potential impacts to utilities. Based on the above, there would be less than significant impacts to utilities.

Alternative 4: South Marsh Alternative

Zones B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

Alternative 5: Sinuous Channel Alternative

Zones B1, B2, B3 and Q would be managed in the same phased approach manner described under Alternative 3. Impacts associated with maintenance activities would also be the same as those characterized under Alternative 3.

A sinuous channel and marsh would be created within Zone SG. Construction would include earthmoving activities such as excavating and grading. Standard procedures for locating and avoiding utilities would be implemented during the design and construction phases to avoid potential impacts to utilities. Based on the above, there would be less than significant impacts to utilities.

4.0 Cumulative Impacts

Pursuant to 40 CFR Parts 1500-1508, cumulative impacts of a proposed action must be assessed. A cumulative impact is an "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions."

The intent is to identify impacts of other past, present, and future projects that, when considered together with the Proposed Action, may significantly compound or increase environmental impacts. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Infrastructure, industrial, commercial, residential, and other projects in proximity to the proposed mitigation site are considered to have the potential for creating cumulative impacts in association with the proposed project activity. CEQ's guidance for considering cumulative effects states that NEPA documents "should compare the cumulative effects of multiple actions with appropriate national, regional, state, or community goals to determine whether the total effect is significant".

4.1 Past Impacts

Sepulveda Dam is within the San Fernando Valley. The Los Angeles River made possible the early development of the valley as an agricultural and ranching area. Mission San Fernando, founded in 1797, was located in the valley due to the need to access water. The early agricultural base was developed within the vicinity of the mission. Until the housing boom following World War II, the valley consisted primarily of agricultural Zones and ranches. Accordingly, substantial portions of natural areas within the valley had been modified to accommodate ranching and agriculture prior to the construction of Sepulveda Dam in 1941. The construction of Sepulveda

Dam itself required grading and clearing of land within the Sepulveda Dam Basin and substantial modifications to the river.

The acceleration of urbanization within the San Fernando Valley after World War II created a need for outdoor recreational areas. Effective June 11, 1951, the Corps and the City entered into a 50-year recreational lease. Recreational facilities were first constructed in the Sepulveda Dam Basin in 1959. The construction of the recreational facilities would not have resulted in additional impacts on natural habitat, since lands within the Sepulveda Dam Basin had been used for agriculture. In 1979 and 1988 the City established the two wildlife areas south (48-acre riparian habitat) and north (60-acre upland habitat) of Burbank Boulevard, respectively, thereby converting open and agricultural land into wildlife habitat for birds and small mammals. In 1998, the Corps also added an additional 60 acres of open lands west of Haskell Creek as part of the wildlife reserve. The Corps and the City restored approximately 28 acres of native riparian and upland habitat along Bull Creek starting in 2008.

Increasing urbanization also created a need for a wastewater treatment plant to service the San Fernando Valley. As a result, the Tillman Water Reclamation Plant was constructed within Sepulveda Basin. Phase 1 was completed in 1984 and Phase II in 1991.

4.2 Present Impacts

The City continues to develop, operate, and maintain recreational facilities at the Sepulveda Dam Basin in conjunction with the Corps. The Sepulveda Basin currently supports both recreational and non-recreational uses. Recreational facilities occupy approximately 1,542 acres of land. Recreational facilities include golf courses, parks, a sports center, a baseball field, a garden center, a model airplane field, cricket fields, tennis courts, trails for hiking/jogging, bicycle trails, a lake, and soccer fields. The continued use and maintenance of existing recreational facilities would entail ongoing impacts on air quality, noise, and traffic especially during periods of peak usage. However, these impacts would be minor when compared to air quality, noise, and traffic impacts associated with the built out urban landscape and major thoroughfares surrounding the Sepulveda Basin.

As described under the No Action Alternative, the Corps maintains the Proposed Action Area annually. Activities would entail application of herbicides to non-native vegetation; annual mowing of all shrubs in Zone B and Zone Q; trimming of native trees in Zones B, Q, L, and SG to a height of 8 feet; periodic removal of non-native trees as needed and as resources permit; and maintenance of access roads and the dam operations zone. Furthermore, approximately 5,000 cubic yards of sediment is annually removed from the concrete-lined channel of the Los Angeles River from Burbank Boulevard to the outlet works. These activities are limited to the Proposed Action Area and are typically completed within a four-week duration.

4.3 Future Impacts

The Sepulveda Basin functions primarily as a flood risk management facility, and will continue to do so for the foreseeable future. Continued use would require at a minimum ongoing routine

maintenance activities as described above. Due to the limited scope and duration of maintenance activities, impacts would be minimal.

Surrounded by a built out urban environment, the open space within Sepulveda Basin will continue to be regional resource for recreation and wildlife enthusiasts in the foreseeable future. As a result, multiple supplements to the original 50-year lease with the City has extended recreational uses in the Sepulveda Basin to 2042. Likewise, the city of Los Angeles would likely seek a lease renewal for the Tillman Water Treatment Plant.

4.4 Cumulative Impacts Conclusion

As described in the summary of past, present, and future impacts above, the human and natural environment in the Sepulveda Basin has been, and will continue to be, impacted existing uses ranging from recreation to public infrastructure. The Proposed Sepulveda Dam Basin Vegetation Management Plan would result in minimal impacts to environmental resources as described above. However, these impacts would be minor when compared to air quality, noise, and traffic impacts associated with the built out urban landscape and major thoroughfares surrounding the Sepulveda Basin. Though the Proposed Action could result in additional diversity or additional growth of native vegetation within the lower basin under all action alternatives, the native vegetation within the lower basin would continue to be maintained at a minimum under the No Action Alternative. Overall, the Proposed Action would not result in significant environmental consequences and would not result in incremental cumulative adverse impacts on the human environment.

6.0 Environmental Compliance

Clean Air Act

The Proposed Action would not violate any Federal air quality standards, exceed the U.S. EPA's general conformity de minimis threshold, or hinder the attainment of air quality objectives in the local air basin.

Clean Water Act

The Proposed Action may result in discharges of fill within the waters of the US. Verification of compliance with Section 404 of the Clean Water Act will be completed upon identification of a preferred alternative as applicable. A Section 401 Water Quality Certification would be secured upon identification of a preferred alternative as applicable

Endangered Species Act

No Federally listed taxa have been located within the proposed project area (surveyed in summer 2011, summer 2012, summer 2013, and summer/winter 2014, summer/fall 2015), nor is the area designated as critical habitat for any Federally listed taxa. Therefore, the Proposed Action would not affect Federally endangered species and would be in compliance with the Endangered Species Act.

National Environmental Policy Act

This EA has evaluated a reasonable range of alternatives within the context of the purpose and need. Furthermore, this EA has evaluated and disclosed anticipated environmental impacts.

National Historic Preservation Act

The Proposed Undertaking would have no effect on historic properties. Consultation with the State Historic Preservation Officer will occur to receive concurrence on this determination.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

The Proposed Action would not result in long-term environmental impacts that would disproportionately affect minority and low income communities.

7.0 List of Preparers

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