Puente Hills
Habitat Preservation Authority
Endowment Provided by the Puente Hills Landfill

April 19, 2016

REQUEST FOR PROPOSAL

Native Habitat Restoration
Project: SCE TRTP Mitigation

Background:
The Puente Hills Habitat Preservation Authority (Habitat Authority) is a joint powers authority that owns and/or manages the 3,800+ acre Puente Hills Preserve within the cities of Whittier, La Habra Heights, and Hacienda Heights. According to its mission, the Habitat Authority is dedicated to the acquisition, restoration, and management of open space in the Puente Hills for preservation of the land in perpetuity, with the primary purpose to protect the biological diversity. Additionally, the agency endeavors to provide opportunities for outdoor education and low-impact recreation. The agency also conducts native habitat restoration for other agencies/companies as mitigation for impacts to various habitats/endangered species.

Project:
This Request for Proposal (RFP) is seeking applicants that can implement a successful program of compensatory native habitat restoration for coastal sage scrub, oak woodland and walnut woodland habitats. Under this contract, the Restoration Contractor (RC) will be required to restore 3.5 acres of oak woodland habitat, 3.5 acres of walnut woodland habitat, and 53 acres of coastal sage scrub habitat (specifically purple sage scrub and sagebrush scrub habitats) in the Powder Canyon area of the Puente Hills Preserve (Exhibit A). Specific goals of each habitat type are listed in the attached Execution Plans (Exhibit B).

This contract will cover site preparation, installation of plant material and 5 years of maintenance. Specific work will include site preparation such as weeding (by hand and mechanically) and grow-and-kill cycles (including herbicide application), installation of native vegetation (including planting of container stock/acorns, hydroseeding), installation and operation of irrigation and maintenance. The RC will be responsible for coordinating the growth of the container plants with a qualified native plant nursery (as approved by the Habitat Authority), to ensure project is completed as specified in the attached Execution Plans to meet success criteria, and as specified at the mandatory job walk and to regularly coordinate with Land IQ, the Habitat Authority's consultant on this project.

Site preparation is expected to begin in fall 2016.

Qualifications:
Qualified bidders must demonstrate the following to be considered for the project:

- Demonstrated experience in successful native habitat restoration within southern California in oak woodland, walnut woodland and coastal sage scrub habitat types.
- Demonstrated ability to execute habitat restoration according to a restoration plan for projects of at least 15 acres of upland habitat.
- Proven ability to achieve success criteria within a 5-year time period on a minimum of three projects of at least 15 acres in size.
- Experience contracting with native plant growers to have native plants grown according to Execution Plans (or otherwise known as Restoration Plans) in a timely fashion, coordinate delivery and/or pickup and inspect plants for health.
- At least three successful projects in southern California where contractor demonstrated the ability to determine the size and location of irrigation system (lines and pumps) needed for a project of this scale and terrain. Knowledge of overhead, drip, and microspray irrigation systems operated without timers/controllers.
- Competency securing and applying arbuscular mycorrhizal inoculum.
- Previous experience working within and around coastal California Gnatcatcher occupied habitat throughout the year.
- Previous successful project work in the Puente Hills Preserve is desirable.
- Registration - All bidders must comply with California Labor Code section 1725.5 regarding contractors and subcontractors registering with the California Department of Industrial Relations and provide proof of registration to Habitat Authority. Bidders who fail to comply are nonresponsive. Pursuant to Labor Code section 1771.4 the contract awarded will be subject to compliance monitoring and enforcement by the Department of Industrial Relations.
- The contractor shall hold a valid California C-27 Contractor's License and shall keep and maintain the C-27 Contractor's License current throughout the term of the Contract.

RFP Submittals:
Proposals must at least include the following INCLUDING DEMONSTRATING QUALIFICATIONS ABOVE:

- Name of group submitting proposal - Name the group or individuals submitting the habitat restoration proposal. Include name of project coordinator, address, telephone and facsimile number and e-mail address.
- Completed bid sheets and rate sheet –any additional information needed to explain information on the bid sheets shall be attached to the bid sheets (Attachment 2). As a note, direct water costs will be paid by the Habitat Authority. Also include a prevailing wage rate sheet for any job classifications used in this project as well as equipment and vehicles. In compliance with Labor

Code section 1771.5 prevailing wage applies. In compliance with Labor Code section 1773.2 copies of the general prevailing rate of per diem wages and general prevailing rate for holiday and overtime work in the locality of the project are on file at the offices of the Habitat Authority and are available upon request.

- Description of native habitat restoration and management experience/capabilities - Please detail your experience with site preparation, seeding, container planting, mowing, herbicide application, plant identification, irrigation and any other appropriate activity.
- Experience in a Preserve setting - A summary of your experience conducting native habitat restoration in a Preserve-type environment with special conditions working in and around sensitive habitats and species.
- References - Provide references for at least five native restoration project sites within the last 10 years. At least one reference must be from each of the various habitat types; oak woodland, walnut woodland and coastal sage scrub (coastal sage scrub references should be at least 15 acres in size; woodland references must be a minimum of 5 acres). Information should include the contracting company/agency, contact name, phone number, habitat type, number of acres restored, years worked on the project, restoration activities conducted, and when goals achieved. A description of each of the five reference projects, including photographs and any other measures of successful implementation (such as agency sign-off) is important.
- Personnel - Provide information about the qualifications of lead personnel or project managers, as well as any other information about the qualifications of crews, including the project foreman, if available. A qualified firm's proposed project manager and site supervisor each shall possess a minimum of 10 years experience with successful restoration in upland habitat.
- Equipment owned/leased - Provide information about the equipment available for performing the work, including any proposed equipment leases or purchases. List any equipment that is currently owned that could be used in restoration projects.
- Non-Collusion Declaration. All bidders must submit a non-collusion declaration in compliance with California Public Contract Code section 7106 (Attachment 1).
- Bid Security - Pursuant to California Public Contract Code section 20471.5, all bidders are required to include in their bid packages a bid security payable to the Puente Hills Habitat Preservation Authority in the form of a cashier's check, certified check or a bid bond an amount equal to 10 percent of the bid.
- Required Bonds - Prior to execution of any contract awarded hereto the successful bidder is required to deliver to Habitat Authority a performance bond in the full amount of the contract and a payment bond pursuant to the provisions of California Civil Code section 9550 et seq. Both bonds must be issued by a California admitted surety-insurer and contractor must provide evidence that the surety is a California admitted surety-insurer. The contractor agrees to maintain the performance bond and the payment bond for the term of the contract.

- Subcontractors - Bidders are required to comply with the Subletting and Contracting Fair Practices Act (Public Contract Code section 4100 et seq.), and specifically section 4104, by listing each subcontractor, location of place of business, and California contractor license number.
- Contractor's License - Provide a copy of your valid California C-27 Contractor's License.

Please submit 2 copies of the required submittals no later than **4 p.m., Wednesday, June 8, 2016** to the following address (emailed copies will be accepted in lieu of the required hard copies):

Lizette Longacre, Ecologist
Habitat Authority
7702 Washington Avenue, Suite C
Whittier, California 90602
llongacre@habitatauthority.org

Mandatory Job Walk:
A mandatory job walk is scheduled for 9:00 a.m., Tuesday, May 3, 2016. Please meet at the Powder Canyon Trailhead (33°57'53.59"N, 117°55'8.71"W) located on Fullerton Road just west of Harbor Boulevard in La Habra Heights, CA 90631 (Exhibit C). Drive in the trailhead entrance and park in the parking lot by the horse ring.

Documents:
The complete RFP with exhibits and attachments are available for download at www.habitatauthority.org/2016/04/RestorationRFP. We highly suggest you review these prior to the job walk. A few copies will be available at the mandatory job walk. To obtain hard copies please contact Lizette Longacre, Habitat Authority Ecologist, at (562) 945-9003 or llongacre@habitatauthority.org.

The Habitat Authority reserves the right to withdraw this RFP at any time and for any reason and to issue such clarifications, modifications, and/or amendments as they may deem appropriate. Any additional information will be posted on the above mentioned website, and it will be the responsibility of the applicants to check for updates.

Selection Process:
Proposals will be evaluated by a technical committee composed of the Habitat Authority employees and any technical advisors deemed critical to evaluation of this RFP. Upon completion of the proposal review, the committee may recommend short listing the proposals that are potentially acceptable and may request more information of the applicants. The Habitat Authority will make the final selection for funding and reserves the right to reject any and all bids.

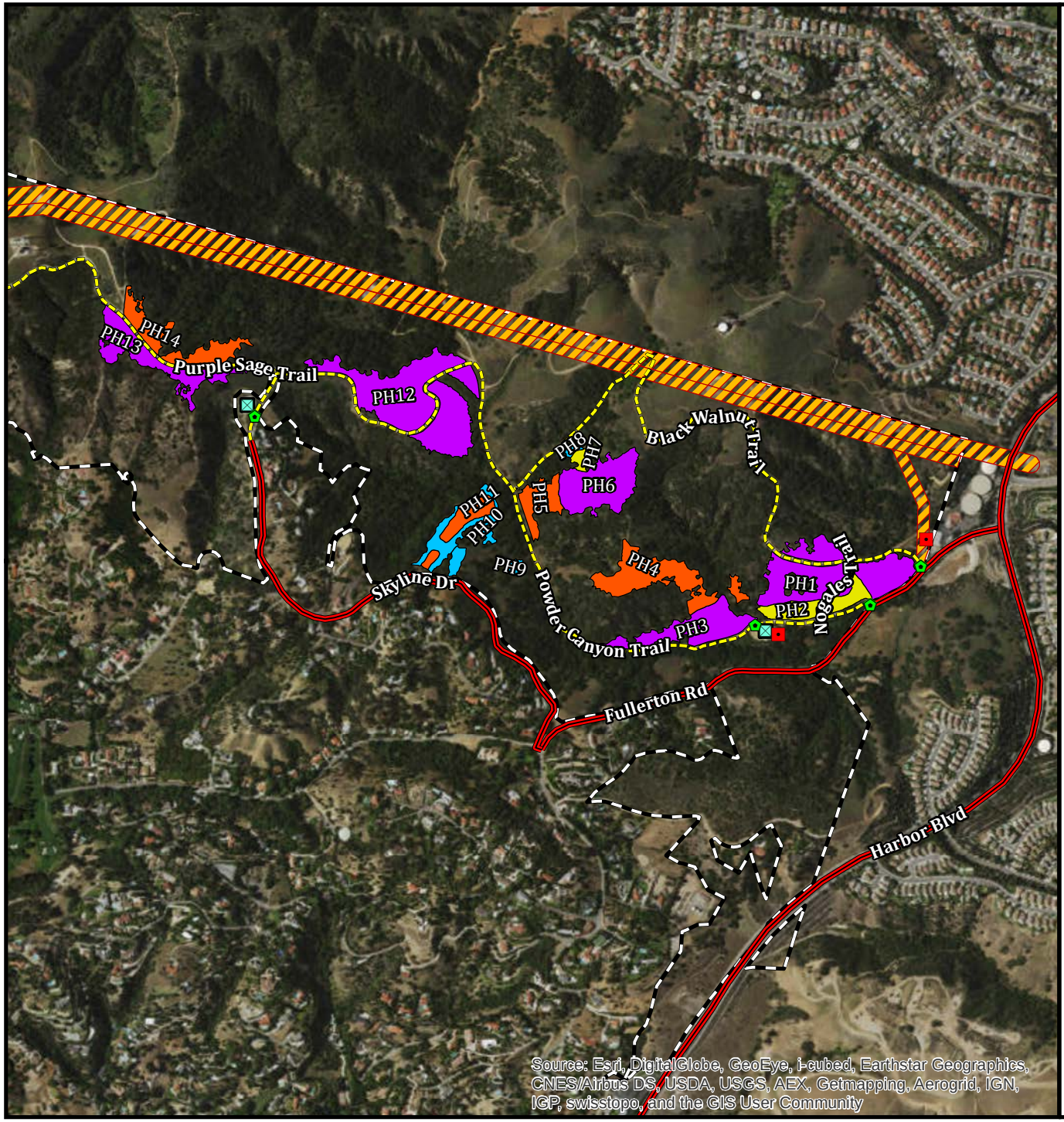
Other Legal and Contracting Requirements:
Successful projects will enter into a contractual agreement with the Puente Hills Habitat Preservation Authority. The draft contract is attached (Exhibit D).

RFP Timeline:
Release RFP – Thursday, April 19, 2016
Mandatory Job Walk - 9:00 a.m., Tuesday, May 3, 2016. Please RSVP (not required).
Questions Due – Friday, May 20, 2016
Responses to Questions provided by Habitat Authority by – Wednesday, May 25, 2016
Proposals Due to Habitat Authority – Wednesday, June 8, 2016 4 p.m.

Contact:
If you have questions pertaining to this RFP, please contact:

Lizette Longacre, Ecologist
Puente Hills Habitat Preservation Authority
llongacre@habitatauthority.org
(562) 945-9003 or (562) 201-2062

EXHIBIT A
Execution Plan Maps (Figures 1-15)



TRTP Restoration Execution Plan

Segment #: 8 Off-site Mitigation Puente Hills Preserve
Restoration Area: PH1, PH2, PH3, PH4, PH5, PH6, PH7, PH8, PH9, PH10, PH11, PH12, PH13, PH14

Restoration Habitat/Level/Acres

- Oak Woodland/4/3.5 acres
- Purple Sage Scrub/4/38.68 acres*
- Sagebrush Scrub/4/14.32 acres*
- Walnut Woodland/4/3.5 acres

Note: Restoration Level 4 - includes weeding, seeding, container planting throughout, supplemental irrigation thoughout

* If water availability is limited hydroseed only

Project Elements and Existing Conditions

- Potential Staging Areas
- SCE Easement
- Access Gate
- Preserve Boundary
- Water Source
- Foot Trail
- Maintained Fire Road
- Surface Street

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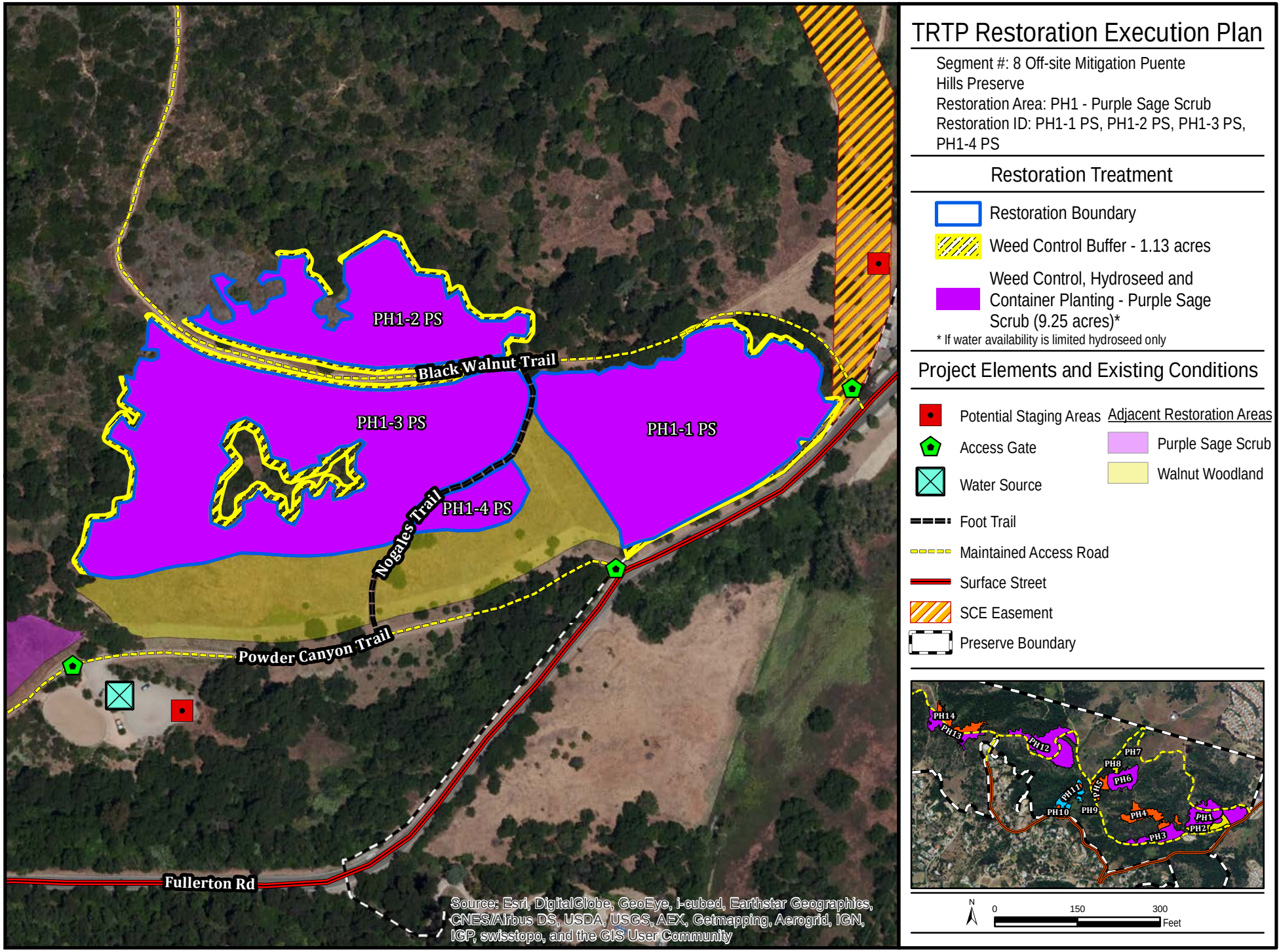
Figure 1 of 15

FINAL March 30, 2016



TRTP Restoration Execution Plan

Segment #: 8 Off-site Mitigation Puente Hills Preserve
Restoration Area: PH1 - Purple Sage Scrub
Restoration ID: PH1-1 PS, PH1-2 PS, PH1-3 PS, PH1-4 PS

Restoration Treatment

- Restoration Boundary
- Weed Control Buffer - 1.13 acres
- Weed Control, Hydroseed and Container Planting - Purple Sage Scrub (9.25 acres)*

* If water availability is limited hydroseed only

Project Elements and Existing Conditions

- Potential Staging Areas
- Access Gate
- Water Source
- Foot Trail
- Maintained Access Road
- Surface Street
- SCE Easement
- Preserve Boundary

Adjacent Restoration Areas
- Purple Sage Scrub
- Walnut Woodland

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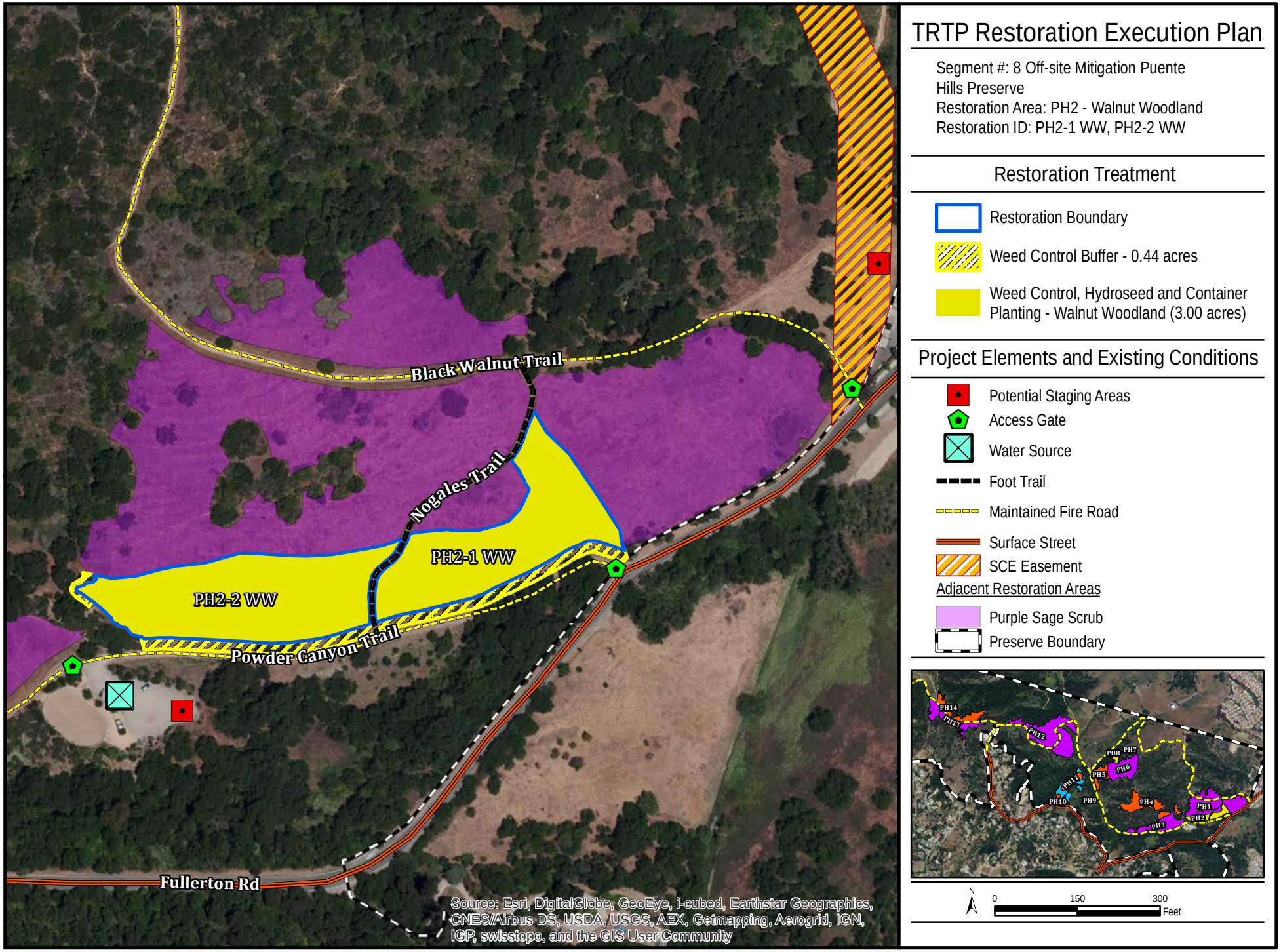

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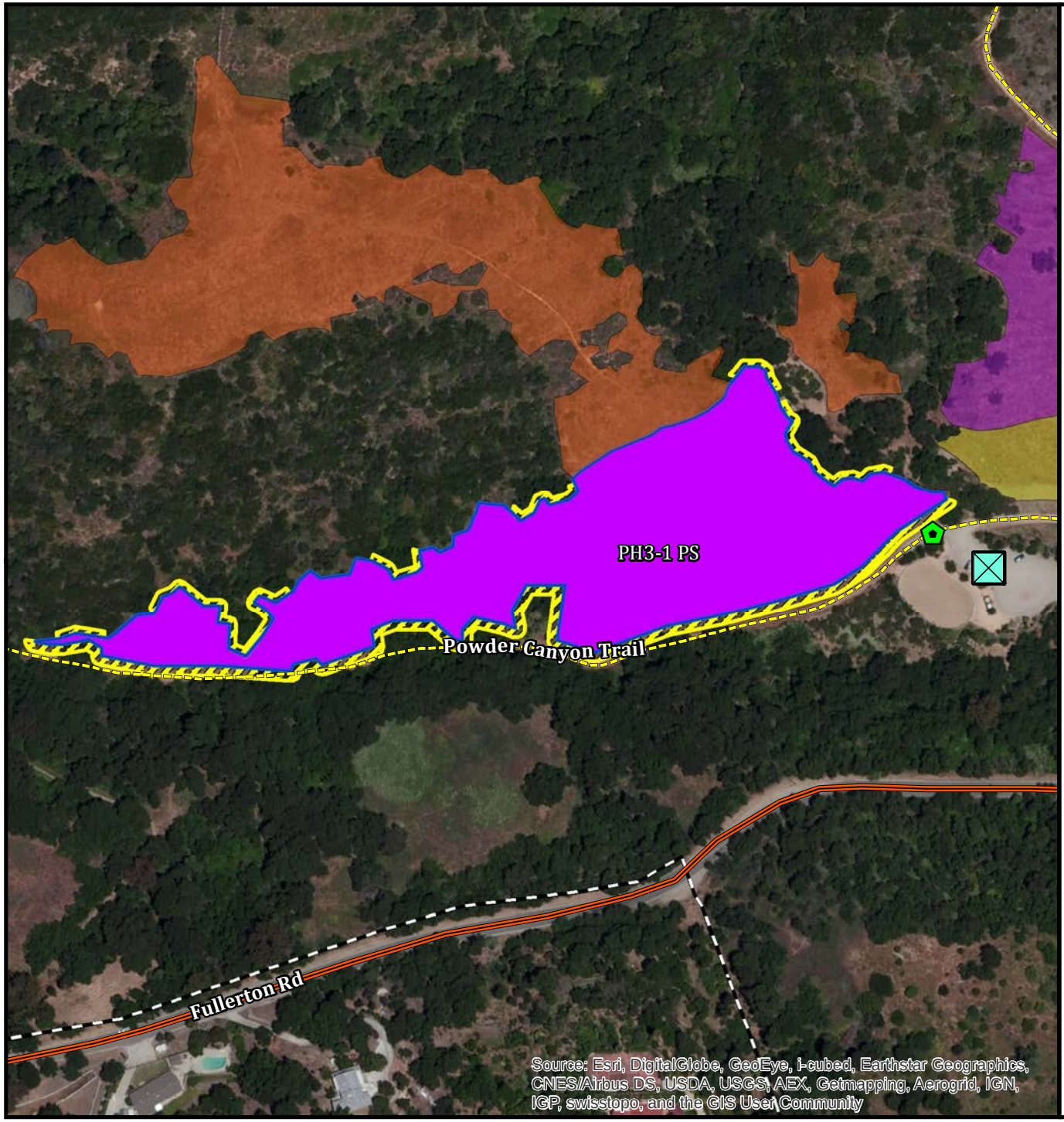


TRTP Restoration Execution Plan

Segment #: 8 Off-site Mitigation: Puente Hills Preserve
Restoration Area: PH3 - Purple Sage Scrub
Restoration ID: PH3-1 PS

Restoration Treatment

- Restoration Boundary
- Weed Control Buffer - 0.85 acres
- Weed Control, Hydroseed and Container Planting - Purple Sage Scrub (4.88 acres)*

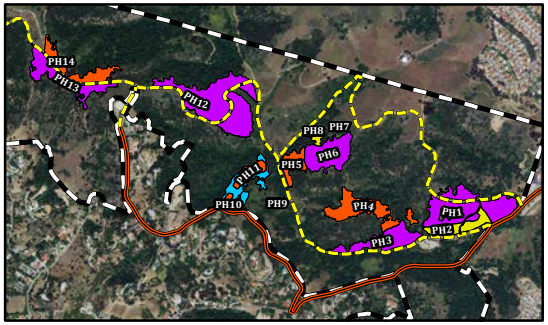
* If water availability is limited hydroseed only

Project Elements and Existing Conditions

- Access Gate
- Water Source
- Maintained Fire Road
- Surface Street

Adjacent Restoration Areas

- Purple Sage Scrub
- Sagebrush Scrub
- Walnut Woodland
- Preserve Boundary



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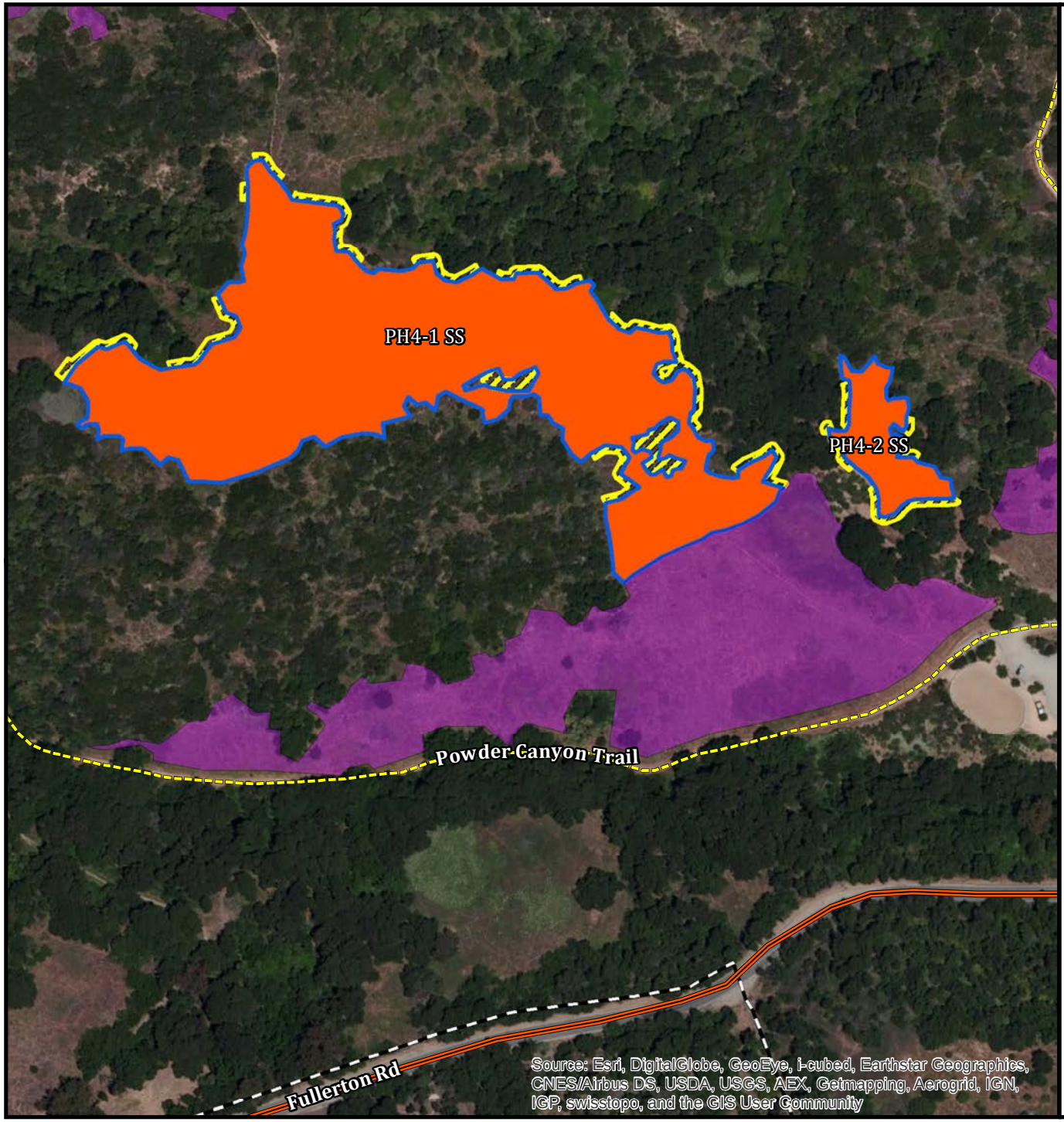


TRTP Restoration Execution Plan

Segment #: 8 Off-site Mitigation Puente Hills Preserve
Restoration Area: PH4 - Sagebrush Scrub
Restoration ID: PH4-1 SS, PH4-2 SS

Restoration Treatment

- Restoration Boundary
- Weed Control Buffer - 0.57 acres
- Weed Control, Hydroseed, and Container Planting - Sagebrush Scrub (6.00 acres)*

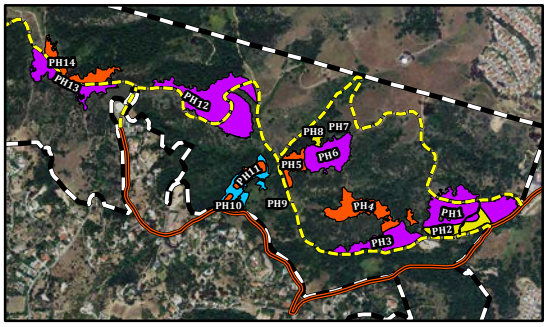
* If water availability is limited hydroseed only

Project Elements and Existing Conditions

- Maintained Fire Road
- Surface Street

Adjacent Restoration Areas

- Purple Sage Scrub
- Preserve Boundary



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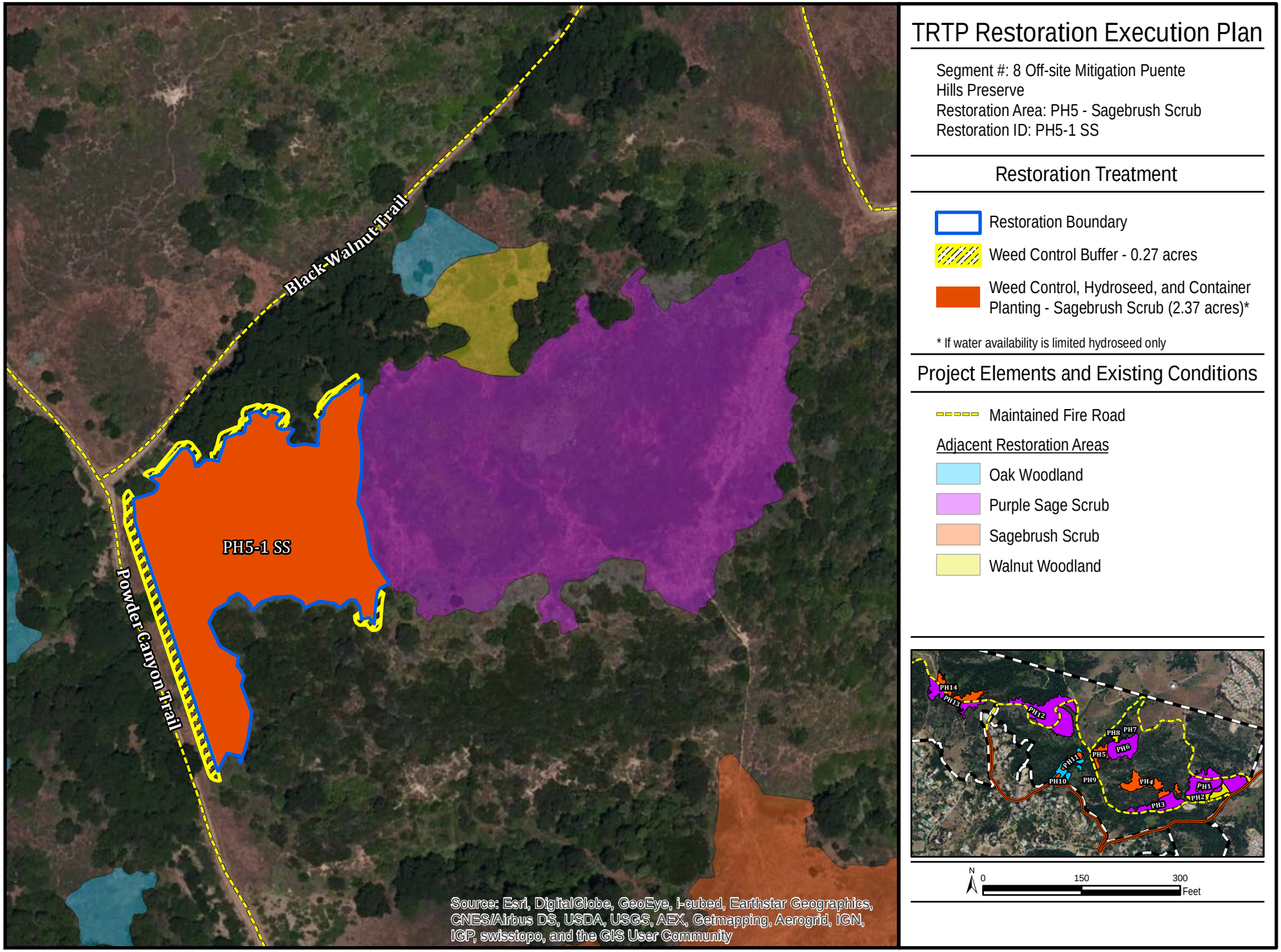

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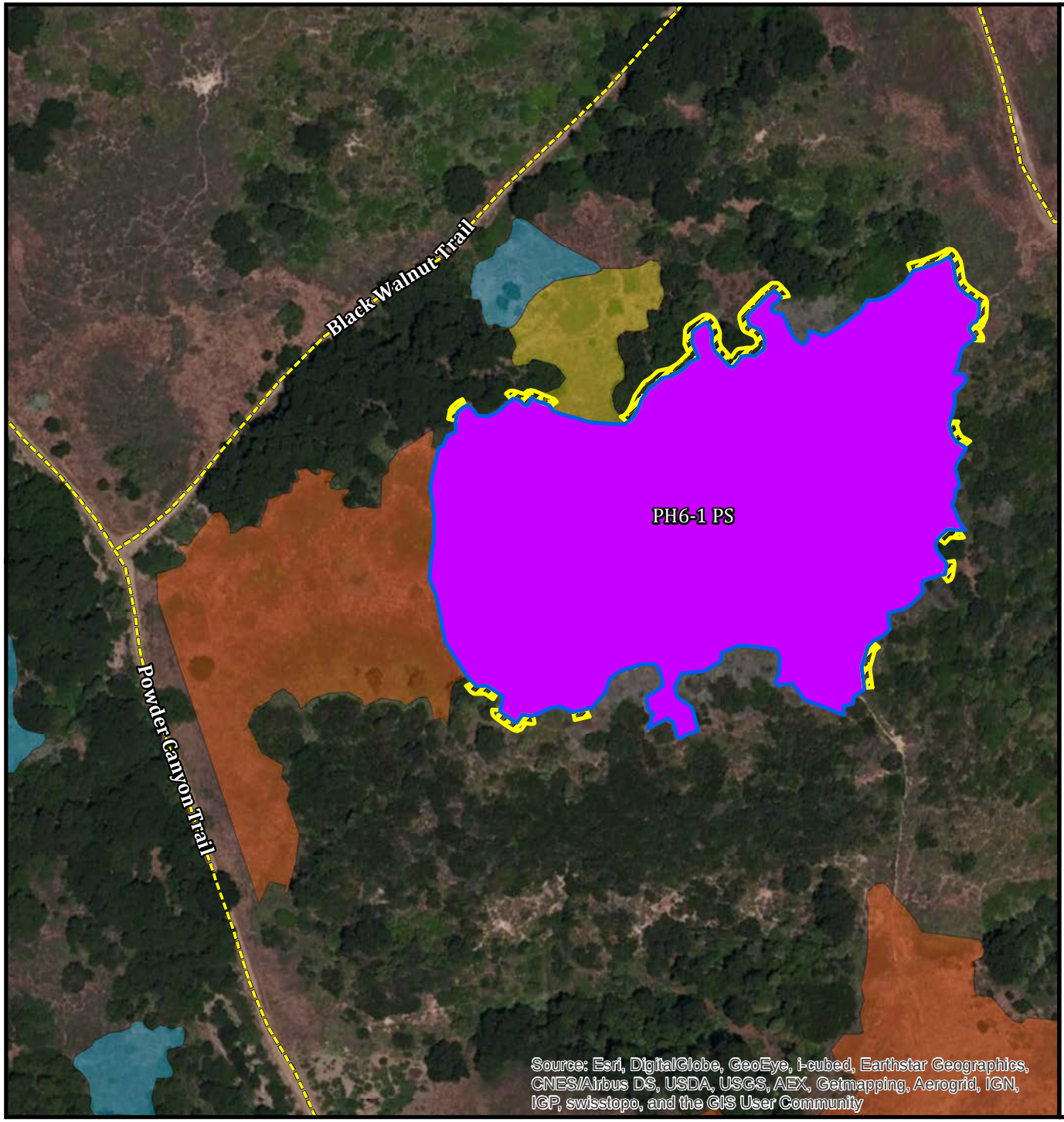


TRTP Restoration Execution Plan

Segment #: 8 Off-site Mitigation Puente Hills Preserve
Restoration Area: PH6 - Purple Sage Scrub
Restoration ID: PH6-1 PS

Restoration Treatment

- Restoration Area Boundary
- Weed Control Buffer - 0.22 acres
- Weed Control, Hydroseed, and Container Planting - Purple Sage Scrub (5.87 acres)*

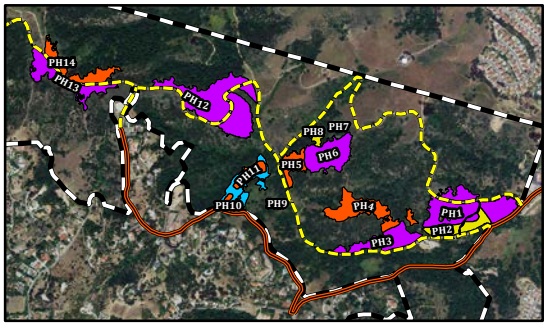
* If water availability is limited hydroseed only

Project Elements and Existing Conditions

- Maintained Fire Road

Adjacent Restoration Areas

- Oak Woodland
- Sagebrush Scrub
- Walnut Woodland



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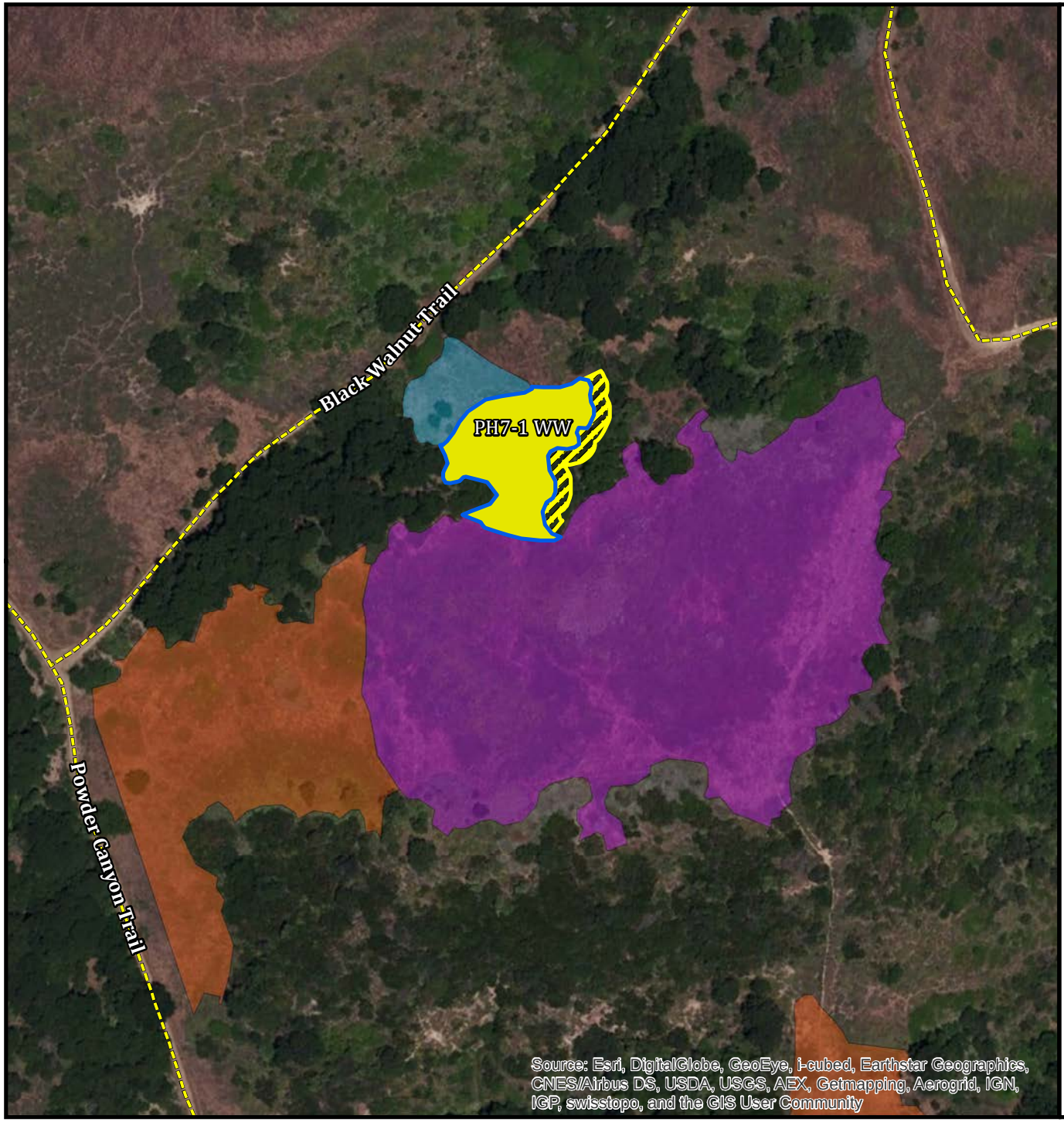


TRTP Restoration Execution Plan

Segment #: 8 Off-site Mitigation Puente Hills Preserve
Restoration Area: PH7 - Walnut Woodland
Restoration ID: PH7-1 WW

Restoration Treatment

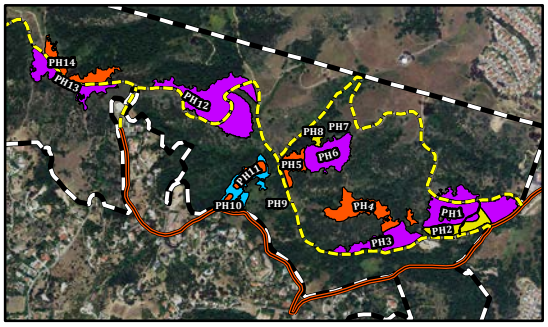
- Restoration Boundary
- Weed Control Buffer - 0.11 acres
- Weed Control, Hydroseed, and Container Planting - Walnut Woodland (0.50 acres)

Project Elements and Existing Conditions

- Maintained Fire Road

Adjacent Restoration Areas

- Oak Woodland
- Purple Sage Scrub
- Sagebrush Scrub
- Preserve Boundary



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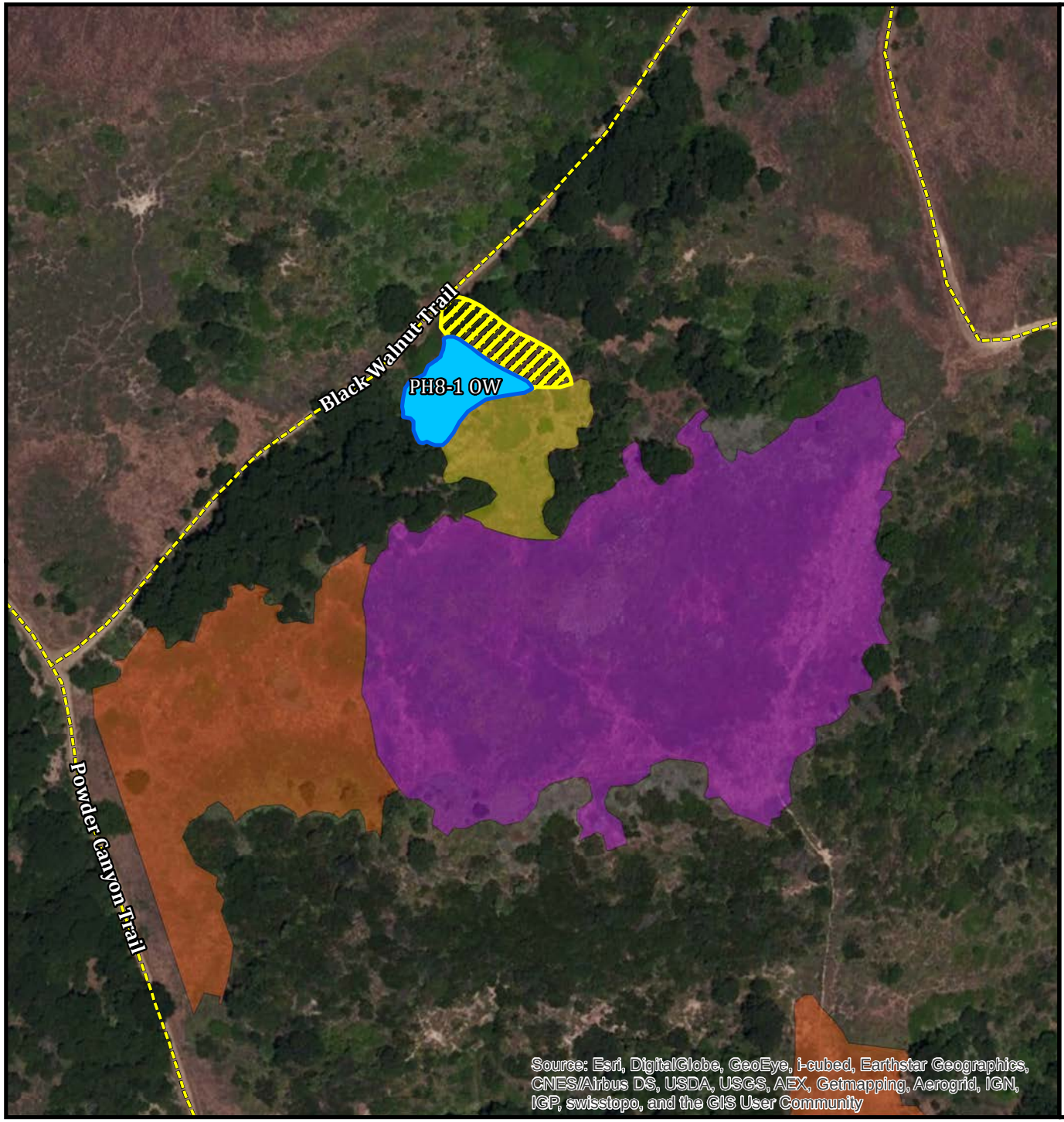


TRTP Restoration Execution Plan

Segment #: 8 Off-site Mitigation Puente Hills Preserve
Restoration Area: PH8 - Oak Woodland
Restoration ID: PH8-1 OW

Restoration Treatment

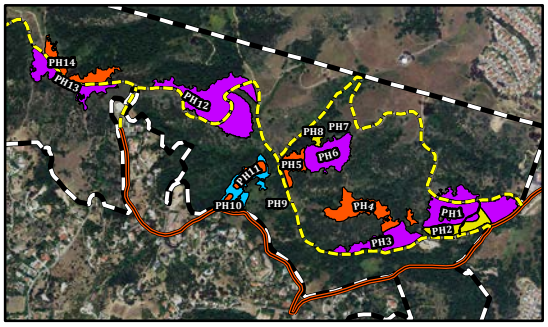
- Restoration Boundary
- Weed Control Buffer - 50 feet (0.20 acres)
- Weed Control, Hydroseed, and Container Planting - Oak Woodland (0.25 acres)

Project Elements and Existing Conditions

- Maintained Fire Road
- Preserve Boundary

Adjacent Restoration Areas

- Purple Sage Scrub
- Sagebrush Scrub
- Walnut Woodland



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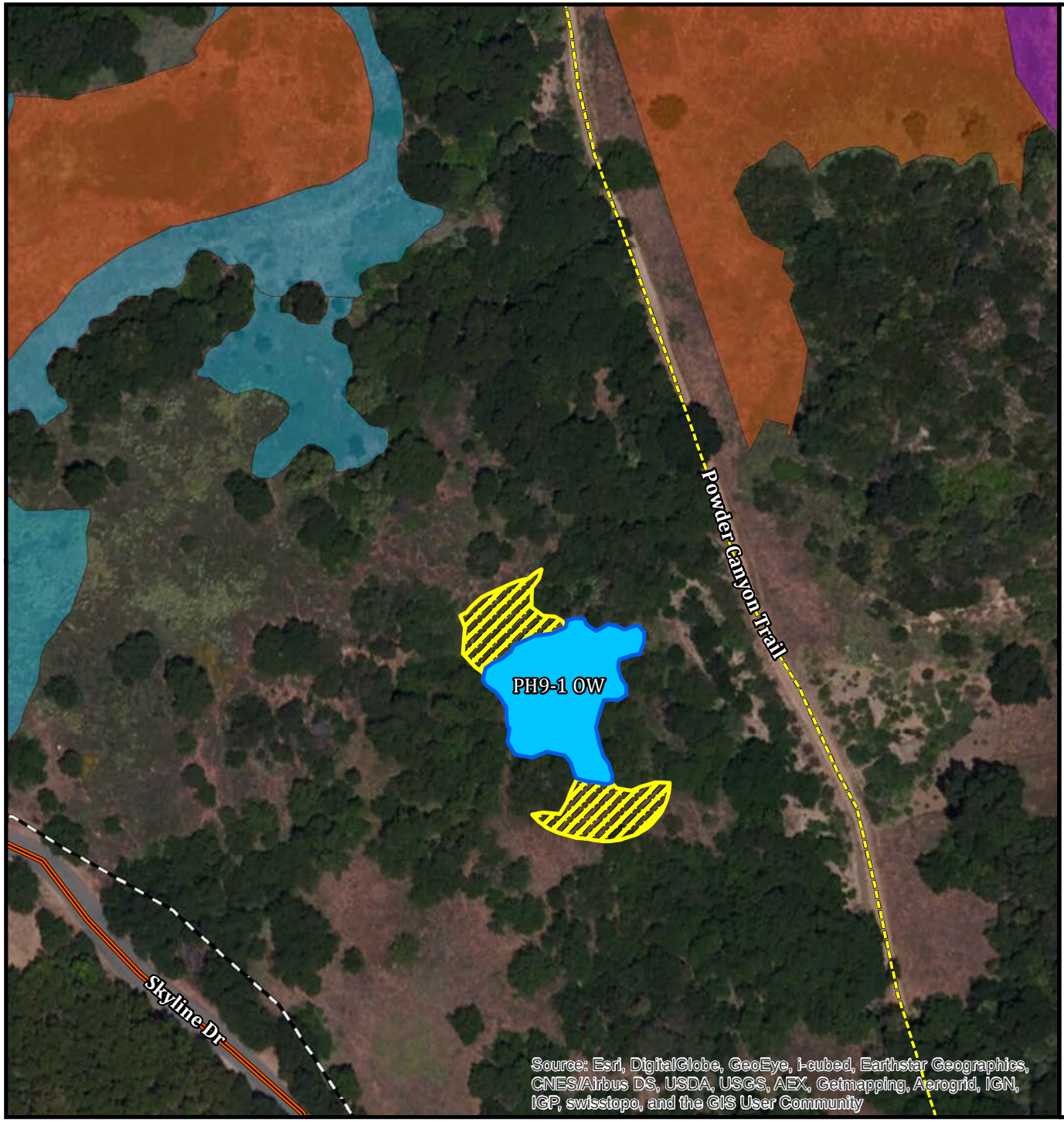


TRTP Restoration Execution Plan

Segment #: 8 Off-site Mitigation Puente Hills Preserve
Restoration Area: PH9 - Oak Woodland
Restoration ID: PH9-1 OW

Restoration Treatment

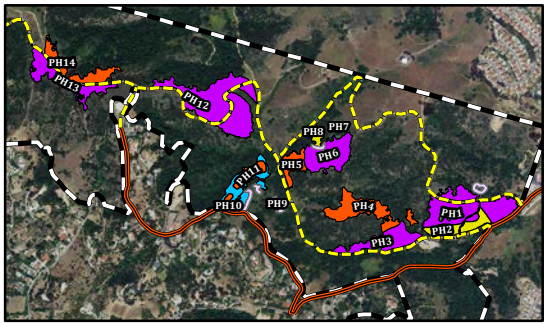
- Restoration Boundary
- Weed Control Buffer - 50 feet (0.18 acres)
- Weed Control, Hydroseed, and Container Planting - Oak Woodland (0.27 acres)

Project Elements and Existing Conditions

- Maintained Fire Road
- Surface Street
- Preserve Boundary

Adjacent Restoration Areas

- Oak Woodland
- Purple Sage Scrub
- Sagebrush Scrub



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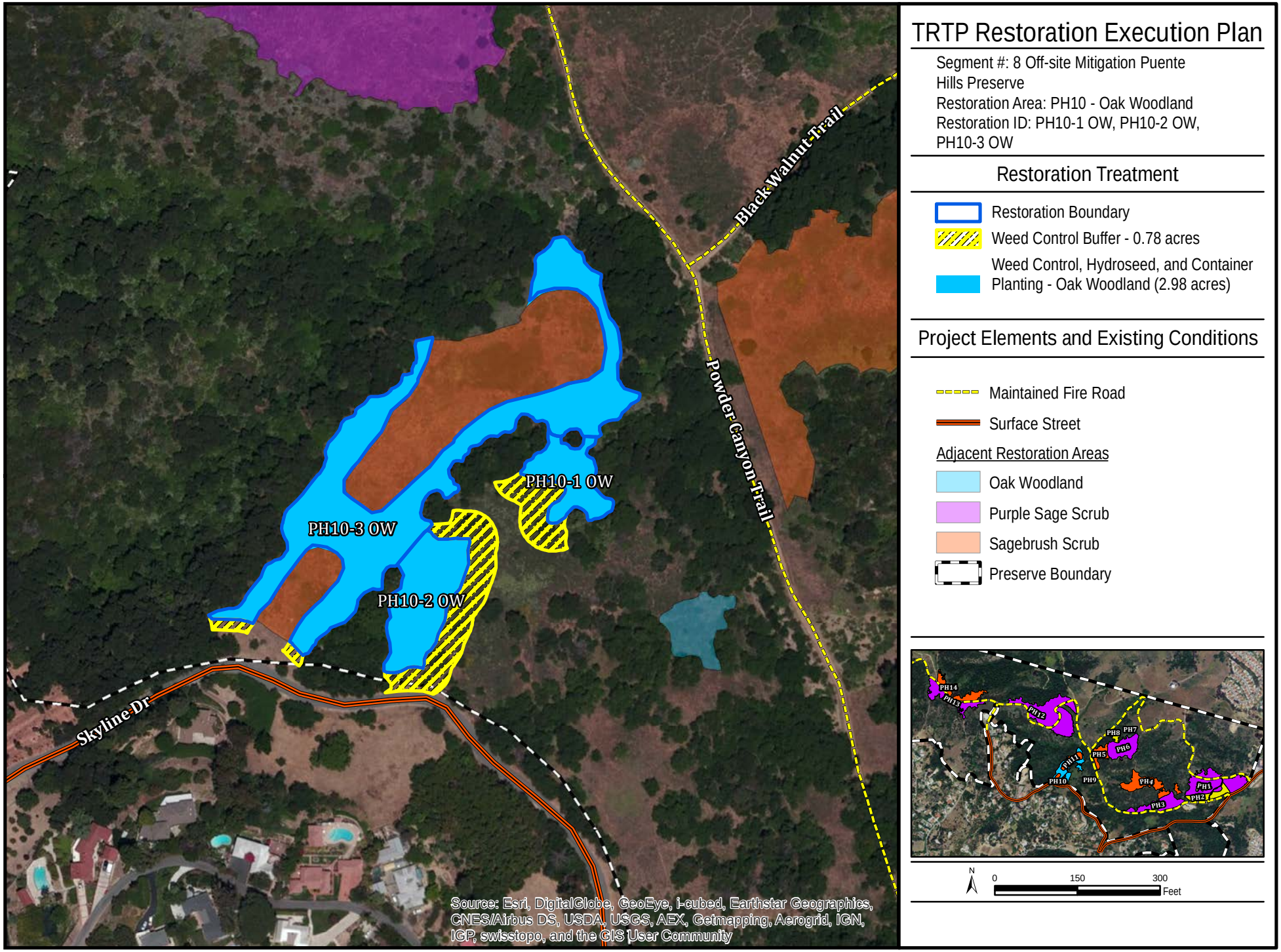

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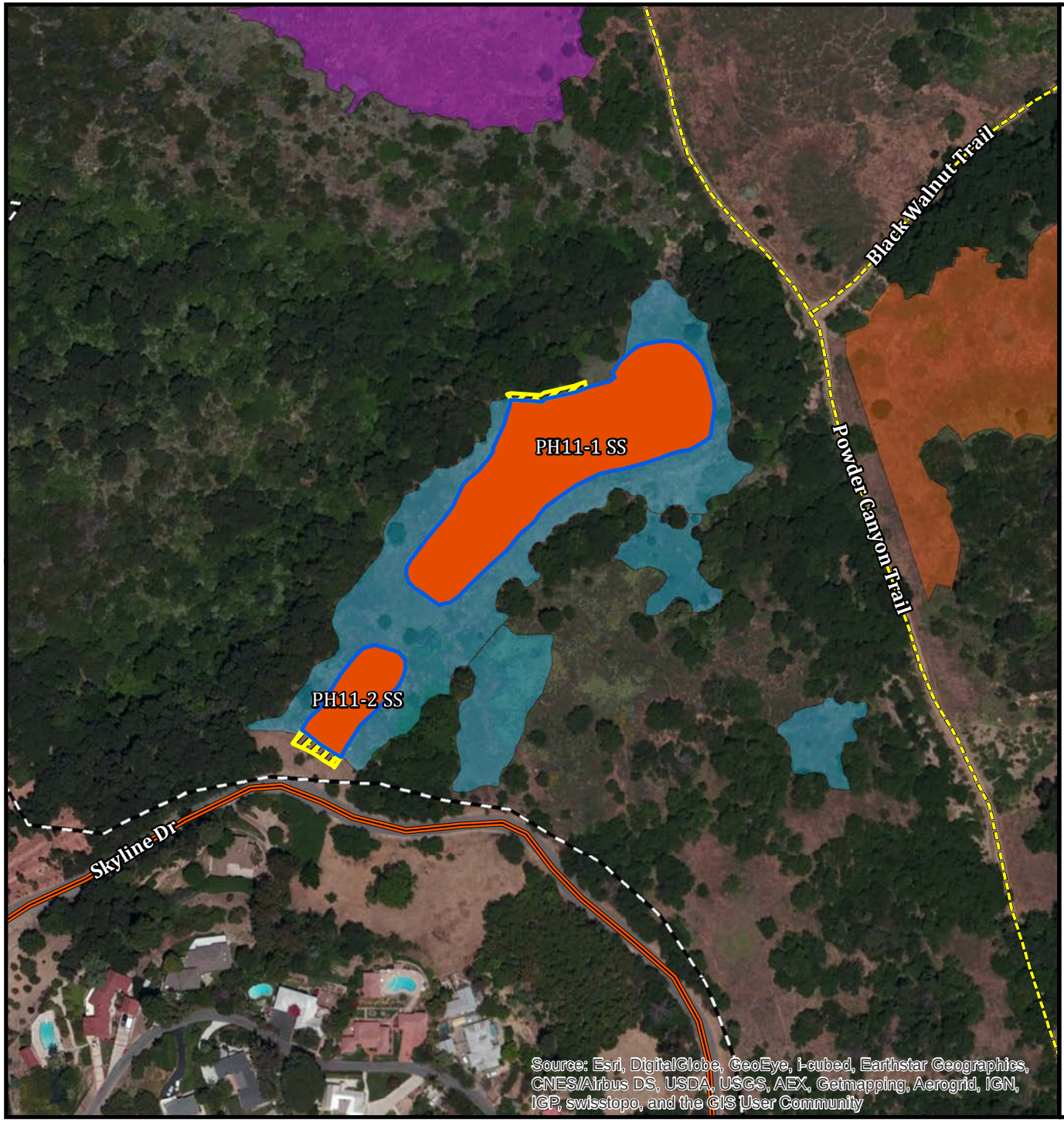


TRTP Restoration Execution Plan

Segment #: 8 Off-site Mitigation Puente Hills Preserve
Restoration Area: PH11 - Sagebrush Scrub
Restoration ID: PH11-1 SS, PH11-2 SS

Restoration Treatment

- Restoration Boundary
- Weed Control Buffer - 0.06 acres
- Weed Control, Hydroseed, and Container Planting - Sagebrush Scrub (1.96 acres)*

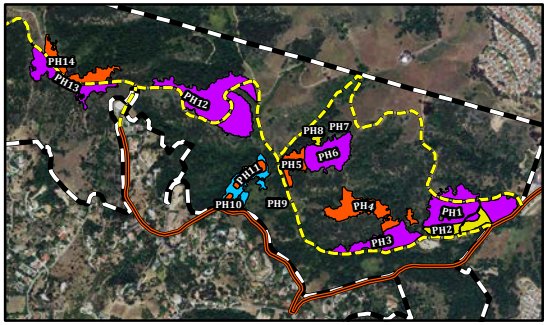
* If water availability is limited hydroseed only

Project Elements and Existing Conditions

- Maintained Fire Road
- Surface Street

Adjacent Restoration Areas

- Oak Woodland
- Purple Sage Scrub
- Sagebrush Scrub
- Preserve Boundary



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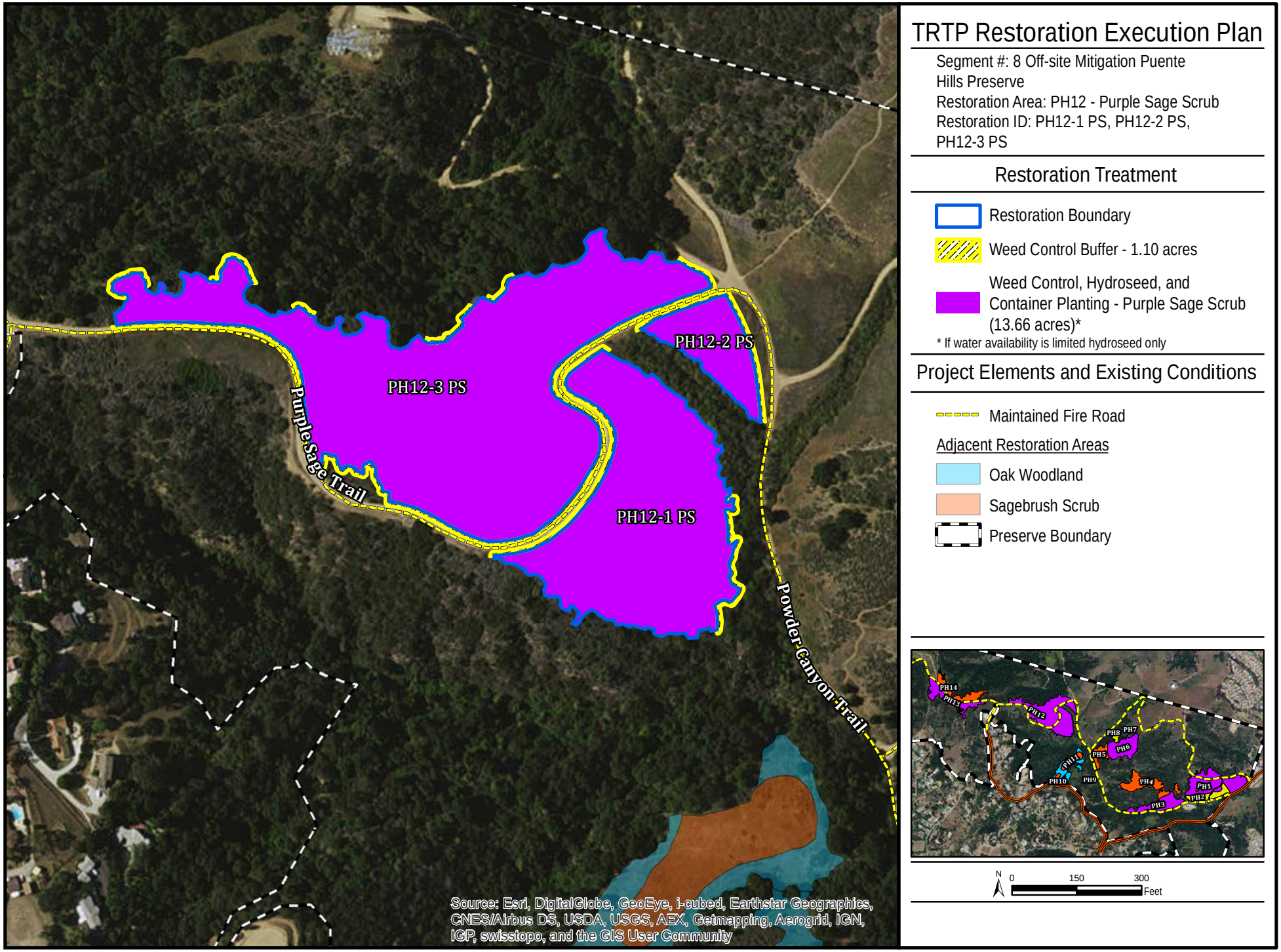

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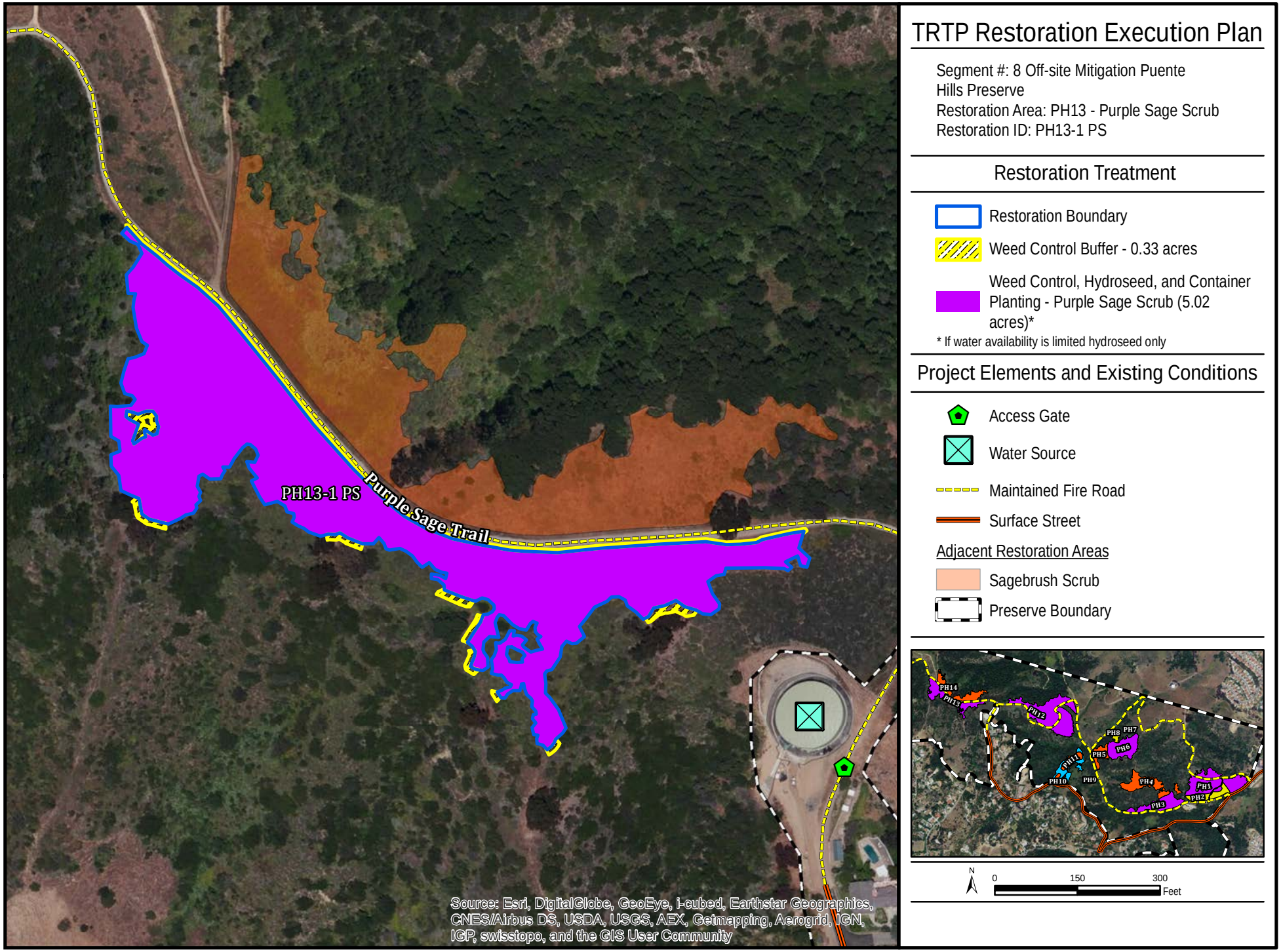

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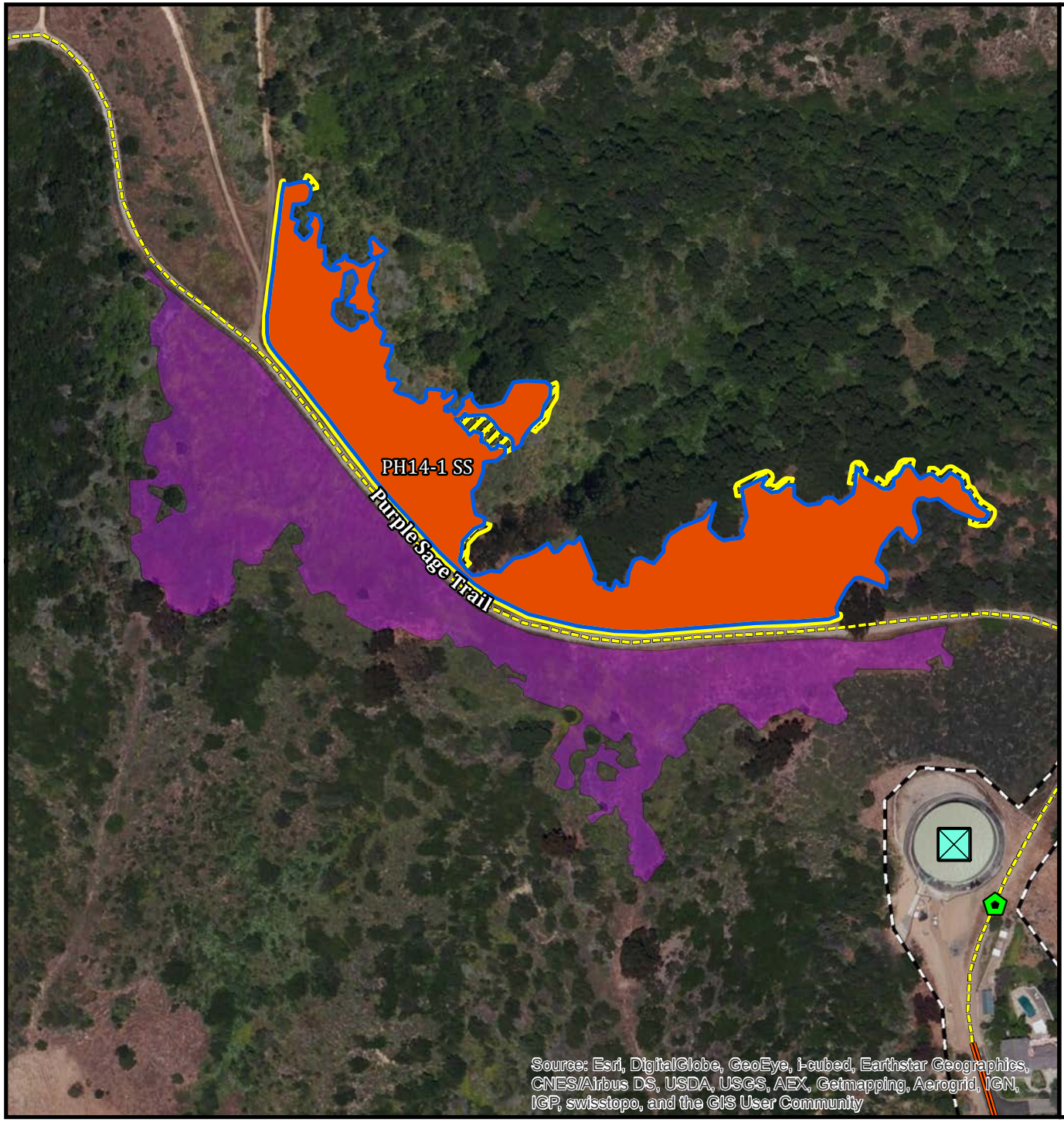

TRTP Restoration Execution Plan

Segment #: 8 Off-site Mitigation Puente Hills Preserve
Restoration Area: PH14 - Sagebrush Scrub
Restoration ID: PH14-1 SS

Restoration Treatment

- Restoration Boundary
- Weed Control Buffer - 0.35 acres
- Weed Control, Hydroseed, and Container Planting - Sagebrush Scrub (3.98 acres)*

* If water availability is limited hydroseed only

Project Elements and Existing Conditions

- Access Gate
- Water Source
- Maintained Fire Road
- Surface Street

Adjacent Restoration Areas

- Purple Sage Scrub
- Preserve Boundary

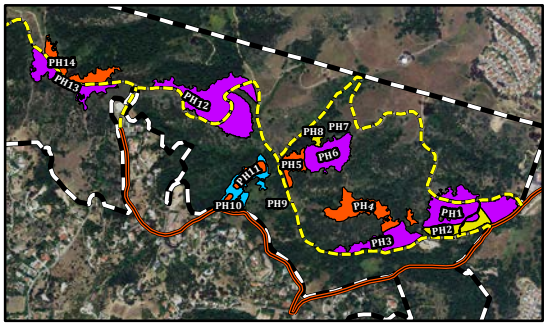

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Figure 15 of 15

FINAL March 30, 2016

EXHIBIT B
Execution Plans

FINAL - Execution Plan for TRTP
Off-Site Mitigation Puente Hills Preserve
Purple Sage Scrub Habitat Restoration

Project Details	
Site Visit Date:	July 6, 10, 13, and 16, 2015
Segment Number:	8 - Off-site Mitigation Puente Hills Preserve Powder Canyon
Restoration Area:	PH1, PH3, PH6, PH12, PH13
Restoration Site Number:	PH1-1 PS, PH1-2 PS, PH1-3 PS, PH1-4 PS, PH3-1 PS, PH6-1 PS, PH12-1 PS, PH12-2 PS, PH12-3 PS, PH13-1 PS
Restoration Activity Level:	4 – Weed control, hydroseeding/container planting throughout, supplemental irrigation throughout
Restoration Habitat Type:	Purple Sage Scrub

A. General Site Description	
A1: Location:	La Habra Heights, California Puente Hills Preserve - See Figure 1 for overview of all Mitigation Areas. See Figure 2 for PH1, Figure 4 for PH3, Figure 7 for PH6, Figure 13 for PH12, and Figure 14 for PH13
A2: Access:	Gate at Powder Canyon Trailhead Parking Lot off of Fullerton Road; Gate at end of Skyline Drive
A3: Area:	38.68 acres
A4: Existing Infrastructure:	Maintained fire roads
A5: Jurisdictional Features:	No
A6: Environmental Sensitive Area:	California gnatcatcher critical habitat areas adjacent to restoration sites. • Environmental Awareness training for sensitive bird species will

A. General Site Description	
	be conducted for restoration contractor personnel prior to initiation of work. • Initial site clearing and plant material installation will be done outside of the breeding season. Majority of maintenance activities, weeding and irrigation will be done outside of the breeding season. • A 200-foot buffer will be established around identified California gnatcatcher nests and territories. Work will be avoided in buffer areas until young have fledged the nest. A 200 foot buffer is an acceptable buffer per the Technical Guidance from the United States Fish and Wildlife Service for restoration activities within the Puente Hills Preserve. • Impacts to existing native vegetation during restoration work will be avoided.
A7: Protective Measures for Nesting Avian Species:	• Environmental Awareness training will be conducted for restoration contractor personnel prior to initiation of work. • Initial site clearing and plant material installation will be done outside of the breeding season. Majority of maintenance activities, weeding and irrigation will be done outside of the breeding season. • 50-foot buffer for any nesting activity • 300-foot buffer for nesting raptors; or as determined appropriate by the Project Biologist • An appropriate and protective buffer will be established for Migratory Bird Treaty Act protected non-game species.
A8: Special-Status Plant Mitigation:	No
A9: Tree Mitigation:	Yes; toyon and blue elderberry

B. Physical Characteristics of Restoration Area	
B1: Topography:	0° to 33° slopes
B2: Aspect:	All aspects, majority of restoration areas east to southeast aspect
B3: Elevation:	660 feet to 1,280 feet
B4: Soils:	Soils ranging from clay loam to clay
B5: Surface Rock and Rockiness:	Surface gravels present and minimal rock outcrops on site
B6: Existing Erosion and Sediment Control BMPs:	None
B7: Weed Percent Cover:	80 – 100%
B8: Dominant Weed Species:	Non-native annual grasses, black mustard (*Brassica nigra*)

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
C1: Staging and Access:	All site work, staging, parking and access shall be restricted to the areas shown on Figure 1	
C2: Adaptive Management:	Adaptive Management Measures will be implemented per the HMMP as described in Chapter 8. Adaptive Management Measures to be implemented are provided in the following sections in the event drought conditions persist and if water supply is restricted by local or state regulations.	Adaptive Management includes the following remedial measures; weed eradication, replacement of container plantings, increased watering, herbivory protection, access restriction measures, and/or reseeding in areas to meet performance standards. Table 8-5, 8-7, and 8-8 shows success criteria and remedial actions to facilitate achieving success standards. Such actions will be taken promptly upon identification of problems and will be implemented as necessary. The Restoration Ecologist (RE) shall approve all remedial measures prior to implementation. If monitoring indicates the mitigation will not meet the success standards at the end of the five year monitoring period, SCE with assistance from the RE will perform analysis to determine which factors are contributing to the condition of the site and propose remedial actions to achieve success standards. If necessary, the RE will develop a remediation plan with approval of SCE immediately following indication the site will not meet success criteria (Table 8-4, 8-5, 8-7, 8-8, and 8-9).

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
C3: Site Preparation		
Recontouring:	None	
Decompaction:	None	
Site Preparation Weed Control:	12 months of site preparation weed control between January and December and continuing if necessary until plant material installation with an irrigated grow-and-kill program. A minimum of three irrigated grow-and-kill events to ensure weed control of early, mid, and late season weed species. Timing shall be scheduled to target optimal weed control and weed removal shall be completed prior to seed set. Weed control methods shall include herbicide application and/or mechanical mowing/cutting. If drought conditions persist and water supply is restricted by local or state regulations grow-and-kill cycles will rely on natural rainfall to promote germination of weed species. Per the HMMP, success of the grow-and-kill cycles will be evaluated by the Restoration Contractor and Restoration Ecologist to determine the need for additional cycles. The grow-and-kill period may be extended until effective weed control is accomplished since natural rainfall driven grow-and-kill programs may require more cycles to equal the control of an irrigated grow-and-kill	The RE shall review weed control methods prior to implementation. The Restoration Contractor (RC) shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: initial site clearing timing and method; Grow-and-kill irrigation timing and duration; Grow-and-kill weed control timing, methods, and weeds controlled. Restoration sites shall be maintained free of trash, microtrash, and debris. The RC will make all reasonable efforts to remove trash and debris from every restoration site prior to installation and throughout the five-year maintenance period. Material will be properly disposed of off-site. Weeded material will be collected and properly disposed of off-site.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	program. If annual rainfall is significantly below average, then additional grow-and-kill cycles extending into the next season may be necessary. Prior to installation the restoration area will be cleared of all weed thatch to facilitate seed/soil contact.	Weed control shall occur in a 5 to 20-foot weed buffer adjacent to portions of Restoration Areas PH1, PH3, PH6, PH12, and PH13 (approximately 3.64 acres) dominated by exotic species and is determined to be a weed seed source. Weed control methods shall consist of mowing non-native grasses and mustard species and selective use of herbicide for invasive species.
C4: Planting and Seeding		
Target Vegetation Community:	Purple Sage Scrub	
Sources of Plant Material:	To the extent possible, all plant material shall be obtained from native plant communities growing within the Puente Hills Preserve. For those species that function as erosion control or do not exist in large enough quantities within the Preserve, it will be necessary to either a) use seed stock from a seed collector/supplier that can be verified as collected within Los Angeles or Orange counties or b) extend the collection area on a species-by-species basis. Seed collection shall be as close as possible to the Preserve to maintain genetic integrity in nearby open space areas such as Chino Hills State Park and Peter F. Schabarum Regional Park or other appropriate inland	The RC shall be responsible for obtaining seed from seed supplier. Seed tags indicating the Pure Live Seed (PLS) and Bulk rate must be attached to each bag of seed and provided to the RE.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	areas in Los Angeles and Orange Counties.	
Methods of Propagation:	Container plants shall be contract grown by a nursery that has experience in growing native plants using propagules collected from approved sites as specified in the HMMP.	The RC shall contract with a plant nursery specializing in native plant propagation. Container plants will be contract grown by a nursery with at least three years of experience growing native plants from the target vegetation communities of the project area. The order shall be placed so that the plants have a well-developed root system and are conditioned prior to planting in Fall/Winter. Arbuscular mycorrhizal inoculum will be purchased and incorporated with the greenhouse mix according to the label at the time of transplantation to containers. The RC and RE will inspect all container plants during the growing stage and upon delivery for planting to verify the plants are the correct species and quantities, are free of weeds, pests, and disease, and showing signs of healthy growth. Plants shall be grown in the specified container long enough to develop a root system that reaches the bottom of the container and forms a healthy root ball without becoming root bound. Any container plants that are not within these standards will be rejected.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
Soil Amendments:	Endomycorrhizal inoculum shall be added to the hydroseed mix as specified in the HMMP. A fertilizer packet (10 grams weight) shall be added at the bottom of each planting hole prior to planting container plants. Each packet shall contain nitrogen, available phosphoric acid and soluble potash plus minor nutrients. The nitrogen, phosphorus, and potassium shall be coated with a polyurethane coating to provide 15.69 percent coated slow-release nitrogen, 5.09 percent coated slow-release available phosphate, and 6.8 percent slowly available soluble potash. Bio Paks® meeting these specifications are available from Reforestation Technologies Inc.	Arbuscular mycorrhizal inoculum shall be added to the hydroseed mix at a rate of 60 pounds per acre (approximately 3,600,000 live propagules per acre) based on the guarantee of the supplier. The supplier shall be a person or company with experience in Arbuscular mycorrhizal development. Commercially available *Glomus intraradices* is recommended since this is an ubiquitous species and will not impede the development of other native Arbuscular mycorrhizal species.
Seeding Method:	Two-step hydroseed application as specified in the HMMP in the Fall/Winter prior to container plant installation. The purple sage scrub seed mix is provided in Table 1.	The RC shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: Hydroseeding date(s) and seed mix applied for each restoration area. Prior to seeding, the restoration area will be cleared of all weed thatch to facilitate seed/soil contact. All hydroseed mixing shall be performed in a clean tank. The hydroseeder must be equipped with a continuous agitation and recirculation

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		system to produce a uniform slurry and have the capacity to apply this slurry in a sweeping motion at a continuous rate. The RC shall spray designated areas with the slurry in a sweeping motion and in an arched stream until a uniform coat is achieved. The seed mix will be applied using a two-step hydroseed application. ***First Application*** The hydroseed mixture must be applied within one hour of preparation. • 500 pounds (lbs)/acre of virgin cellulose wood fiber • 60 lbs/acre of Arbuscular mycorrhizal inoculum • Specified seed mix ***Second Application*** The second application shall occur within two hours following completion of the first application. • 1,500 lbs/acre of virgin cellulose wood fiber • 160 lbs/acre of organic M-binder (Ecology Control or comparable

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		product)
Container Planting:	Container plant installation shall be in the Fall/Winter as specified in the HMMP following hydroseed application planted in groups at the specified spacing and aspect shown in Table 2.	The RC shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: quantity of container plants per species installed in each restoration area. The RE will inspect and approve all container plants prior to planting to verify the plants are the correct species and quantities, are free of weeds, pests, and disease, and showing signs of healthy growth. Any container plants that are not within these standards will be rejected. Plant layout will be determined based on micro topographic features and planting sites will be marked on site using colored pin flags by the RC under the supervision of the RE. Upon plant delivery, container plants shall be stored in a designated temporary storage location. The RC is responsible for protection from herbivory, vandalism or theft, as well as maintenance (watering) of the plants while they are in temporary storage. All container plants shall be planted in accordance with the following specifications

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		• Plants shall be planted with the roots untangled. Roots shall be protected from weather exposure during planting. • Planting holes shall be augured and be no more than 1.5 times the diameter and 2 times the depth of the container species to be planted. • Planting holes shall be backfilled 25 percent with excavated native soil and filled with water and allowed to drain completely prior to planting. Container plants must never be installed in planting holes with standing water; all water shall be allowed to settle and infiltrate through the soil prior to plant installation. • The specified fertilizer packet shall be added to each planting hole just prior to planting. • Plantings shall be set in well-drained planting holes with the crown of the root ball no more than 0.5 inches above grade. Under no circumstances should the plant crown be buried. The soil around the planting shall be tamped down sufficiently to eliminate any air

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		pockets in the soil. • A basin around the planting shall be constructed by creating a berm above the existing grade approximately 24 inches in diameter around the planting. • Each planting shall be sufficiently watered after installation so that water reaches the lower roots.
C5: Irrigation		
Water Source:	1) La Habra Heights Water District – water tank 2) La Habra Heights Water District – backflow device	
Irrigation System:	A temporary overhead irrigation system shall be installed with the following design: • A mainline with lateral lines will be installed with gate-valves to separately manage the areas, as necessary depending on site soils and landforms. • Lateral lines shall be laid out along the contour of slopes so that the top of the slope can be managed separately from the lower slope. • Sprinkler heads shall be sized to accommodate the infiltration rate of the soil and landscape position. The size of the sprinkler heads and application rate will be determined after infiltration is evaluated in each area.	The RE shall approve the irrigation design, layout, and schedules prior to installation of the system and implementation of watering events. Portable booster pumps may be necessary to pump water to upper portions of the restoration areas. Each pump shall have containment surrounding them and only operated when a member of the RC crew is on-site.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	• The system shall be laid out so that the wetted area from each sprinkler head has no more than a two- to three-foot overlap with adjacent sprinklers. The final layout design will depend on the system water pressure and the size of the sprinkler heads (based on the infiltration rate of the soil). • All sprinkler stems shall be fitted with on/off ball valves to allow for hose connections and hand watering of container plants at installation and during establishment, as necessary. These valves will also allow particular areas to be shut-off, as necessary. • Operation of the system will require management by a person with demonstrated previous experience irrigating native vegetation. Under no circumstances will the irrigation system be operated with any type of automatic timer. The system will be run manually and only when at least one restoration contractor crew person is on site. If drought conditions persist and water supply is restricted by local or state regulations, container plants will be planted in large groups and irrigation will be applied by micro sprinklers in the planted groups only.	**Alternate Temporary Irrigation System** If drought conditions persist and water supply is restricted by local or state regulations, the irrigation system will supply irrigation for the container plants only and shall be installed with the following design: ***Container Plant Groups*** • A mainline with lateral lines will be installed with gate-valves to separately manage the areas, as necessary depending on site soils and landforms. • PVC lateral lines shall be laid out from the mainline to each container plant group • Low precipitation rate rotary nozzles on risers shall be installed within each container plant group. Nozzles will be installed to water only the container planting group. The application rate will be determined after infiltration is evaluated for each area. • The system shall be laid out so that the wetted area from each low precipitation rate rotary nozzle head has slight overlap with adjacent nozzles. The final layout design will

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	If drought conditions persist and water supply is severely restricted by local or state regulation, restoration areas will be hydroseeded only following the two-step method as specified in the HMMP. Seeded areas will not be irrigated and will rely on natural rainfall for establishment. Coast prickly pear will be planted as pad material. See Table 3 for the purple sagebrush scrub seed mix if seeding only.	depend on the system water pressure (based on the infiltration rate of the soil). • All sprinkler stems shall be fitted with on/off valves to allow for hose connections and hand watering of container plants at installation and during establishment, as necessary. These valves will also allow particular areas to be shut-off, as necessary. • Operation of the system will require management by a person with demonstrated previous experience irrigating native vegetation. Under no circumstances will the irrigation system be operated with any type of automatic timer. The system will be run manually and only when at least one restoration contractor crew person is on site.
Irrigation Timing:	The temporary irrigation system shall provide supplemental irrigation between early fall and late spring to extend the rainy season during the first two years of establishment as necessary for plant establishment. Irrigation events will depend on evapotranspiration between irrigation events and soil	Irrigation shall be implemented as needed to supplement or mimic natural rainfall patterns in such a way that the plants develop deep root systems to maximize survival and vigor after irrigation is removed. The RC shall be responsible for inspection and timely repair of

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	moisture. Irrigation will consist of wetting the soil to full field capacity (18 inches after planting; and 18-24 inches during plant establishment). After adequate germination of the seed mix, the soil shall be allowed to dry down to approximately 50 to 60 percent of field capacity in the upper 6 to 12 inches of soil before the next irrigation event.	any irrigation deficiency. The RC shall consult with RE to determine if extending or revising the watering schedule is necessary. Watering of restoration sites will be gradually reduced as the plantings become established and mature, and will be discontinued at least two years prior to final acceptance and approval of the restoration site.
C6: Erosion and Sediment Control		
Erosion and Sediment Control BMPs:	No grading or ground disturbance will be performed; weeded areas will be hydroseeded and planted prior to the onset of the rainy season per BMP.	Erosion control measures will only be installed as needed with the approval of the RE.
C7: Maintenance Recommendations		
Weed Control Timing:	Weeds shall be controlled, as necessary, before they set seed and/or before they reach 12 inches in height. The majority of the weed control effort will be required during winter through early summer. The number of maintenance visits shall be determined by need. Approximately four maintenance events shall be estimated for a normal rainfall season with greater or fewer weed events as dictated by fluctuations in rainfall timing and amount.	Nonnative plants will be suppressed for the duration of the maintenance and monitoring period throughout the restoration sites to achieve the nonnative cover Success Criteria presented in Table 8-9. Weed control activities shall include weed control throughout the restoration sites and within the planting basins. All planting basins, or an area 3 feet in diameter around each plant, will be maintained free of weeds during the duration of the maintenance period.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		Weed control in the weed buffer areas shall be implemented as necessary and shall be timed to control weed species prior to seed-set.
Weed Control Methods:	Weed control methods will include mainly hand-pulling and limited selective spot spraying of herbicides for high priority invasive species that may re-sprout from taproots or rhizomes. Limited use of selected herbicides is specified when no other effective alternative is available to remove and control weed species and will be authorized only by the Project Restoration Ecologist. Pre-emergent chemicals shall not be used at any time in the restoration process.	The RE shall review weed control methods prior to implementation. Productive plant materials containing viable seed shall be bagged, removed from the site, and disposed of at an approved location. Weeded material will be collected and properly disposed of off-site. Installed plant material and native plant volunteers shall not be damaged by weed control operations. ***Hand-pulling*** Shall be performed by hand-pulling or using hand tools. Weed removal shall not cause disruption to the root system or the above-ground structure of native plants. ***Herbicide application*** Herbicide control and herbicide product shall be approved by the RE prior to use. All herbicides shall be applied in accordance with all state and federal regulations and manufacturer's instructions by a Licensed

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		Qualified Applicator under the direction of a Pest Control Advisor (PCA). Herbicides shall not be applied during or within 72 hours of a rain event, or when wind velocities exceed five miles per hour. Care will be taken to avoid spraying native species. Herbicide will be applied in a manner that minimizes drip and drift into adjacent areas. At no time shall herbicides be used to control weeds within planting basins. Weed control in weed buffer areas will consist of mowing non-native annual grasses and mustard species and selective use of herbicide for invasive species.
Protective Fencing:	Protective fencing shall be placed along public trails consisting of metal T-bar posts at 30-foot intervals with bright yellow rope attached at a height of approximately four feet. All-weather and graffiti protected signs shall be placed at a few key locations along the fencing with information explaining the sensitivity of the restoration area. The fence will serve as an effective barrier/deterrent to humans without inhibiting wildlife.	
Plant Replacement:	Re-seeding and container plant replacement shall occur per the HMMP if success standards are not met.	The RC is responsible for supplemental planting and seeding to achieve specified success requirements, except in those

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	Per the HMMP Chapter 8 Success Standards for Native Trees page 8-32 and 8-33, tree mitigation species will be over planted during implementation to allow for plant loss during establishment. Overplanting during initial installation will maximize establishment time for tree mitigation species and reduce or eliminate the need for plant replacement later in the restoration process. The following target numbers were determined for tree mitigation species and plant replacement will occur if survivorship falls below the target number. As such, the regulated tree mitigation survival criterion will apply to the target number. *Blue Elderberry* The target number for blue elderberry across all restoration areas is 322, the required tree mitigation number plus a 20 percent contingency. The target number of blue elderberry in the purple sage scrub restoration areas is 179. The target number is derived by multiplying the percentage of blue elderberry to be planted in the purple sage scrub restoration areas (55.5%) by the target number (322). *Toyon* The target number for toyon across all restoration areas is 60, the required tree mitigation plus a 20 percent contingency. The target number of toyon in the	instances where the failure of the restoration areas to meet the survival and cover requirements is due to something beyond the control of the RC (catastrophic events such as flood, fire, etc.). In these circumstances, it would be the financial responsibility of Southern California Edison (SCE), the mitigation sponsor, to provide the supplemental materials. As specified in Mitigation Measure B-1a, if a fire occurs in a revegetation area during the monitoring period, SCE shall be responsible for a one-time replacement. Re-seeding may be prescribed as a remedial measure if the target percent absolute native cover is not met during the 120-day plant establishment period and maintenance/monitoring years 1 through 5. Re-seeding may be prescribed in areas 100 square feet or greater not meeting the minimum cover requirement observed during monitoring visits. Reseeded areas must achieve an equivalent native species cover as the surrounding restored habitat by the end of the five-year maintenance/monitoring period based on performance monitoring described in

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	purple sage scrub restoration areas is 17, derived by multiplying the percentage of toyon to be planted in the purple sage scrub restoration areas (28%) by the target number (60).	Section D Restoration Site Maintenance and Biological Monitoring. See Table 8-4 for Absolute Cover Criteria for Vegetation Community Groups and Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures. Re-seeding shall be implemented by broadcast seeding. Seed may be broadcast onto the site by hand or using a hand-crank spreader. Seed will be premixed with dispersal agent (such as wheat bran) at approximately 25 percent of the overall volume. Prior to seeding the site may be watered to saturate the surface soil to aid in seed adhesion to the soil surface. Seed shall be mixed with a carrier as stated above, and divided into two equal parts. Half of the seed shall be hand-broadcast by walking across the entire area in a linear orientation appropriate for the site. The remaining half of the seed shall be hand-broadcast by walking across the site perpendicular to the first application. Seed areas shall be lightly raked to incorporate seeds into the soil. All replacement planting shall be in-kind unless otherwise specified by the RE. If adjustments to

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		species for replacement planting are determined necessary by the RE, the replacement species must be on the approved plantings list for the associated habitat, and replacements be approved by SCE, and documented in the maintenance inspection logs. Container plant replacement will occur for non-tree mitigation species during the following phases: **120-day plant establishment period** Container plants (non-tree mitigation species) will have 100% survival following the 120-day plant establishment period. All failed container plants will be replaced during this phase of restoration. **Maintenance/Monitoring Years 1 and 2** Container plants (non-tree mitigation species) will have 80% survivorship in years 1 and 2. Failed container plants will be replaced as necessary to achieve 80% survivorship.

D. Restoration Site Maintenance and Biological Monitoring

Activity/Task	Approved Execution Plan	Additional Information from Habitat Mitigation and Monitoring Plan
D1: Maintenance		
Responsible Party	Restoration Contractor	
120-day Plant Establishment Period	Weekly visits to maintain installed plant material. Weed control and irrigation as needed.	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration area: irrigation timing/duration; weed event timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species. See Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial measures if success standards are not met. Restoration sites shall be maintained free of trash, microtrash, and debris. The RC will make all reasonable efforts to remove trash and debris from every restoration site prior to installation and throughout the five-year maintenance period. Material will be properly disposed of off-site.
Year 1 and 2	Timing for weed control will depend on annual weather patterns and may vary by year during the maintenance period with the most intense weeding	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	maintenance in the first and second year. Approximately four maintenance events shall be estimated for a normal rainfall season with greater or fewer weed events as dictated by fluctuations in rainfall timing and amount. Irrigation will be timed to extend the rainy season in the fall and the spring during the first two years of establishment. Irrigation events will depend on evapotranspiration between irrigation events and soil moisture. If drought conditions persist and water supply is restricted by local or state regulations and the restoration areas are seeded only, no supplemental irrigation will be required and plant material will rely on natural rainfall for establishment.	area: irrigation timing/duration; weed event timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species. Weed control in the weed buffer areas shall be implemented as necessary and shall be timed to control weed species prior to seed-set. See Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial measures if success standards are not met.
Year 3 through 5	Seasonal limited spot weeding of select invasive species will be implemented as necessary in years three through five to control weed species while minimizing disturbance to the restoration area.	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration area: irrigation timing/duration; weed event timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		Weed control in the weed buffer areas shall be implemented as necessary and shall be timed to control weed species prior to seed-set. See Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial measures if success standards are not met. The RC will be responsible for removing the irrigation system following final acceptance and approval of the restoration sites.
D2: Maintenance Monitoring		
Responsible Party	Restoration Ecologist	
120-day Plant Establishment Period	Weekly visits in the first month following installation and every two weeks in months two and three	
Quarterly Monitoring	Four visits per year in maintenance and monitoring Year 1 through Year 3 (following the 120-day plant establishment period). Timing will vary depending on annual weather patterns.	
Semi-annual Monitoring	Two visits per year in maintenance and monitoring Year 4 and Year 5. Timing will vary depending on annual weather patterns.	
D3: Biological		

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
Monitoring		
Responsible Party	Restoration Ecologist	
Annual Monitoring	Performance monitoring will be conducted annually in maintenance and monitoring Year 1 through 5 in the spring. Timing will vary depending on annual weather patterns. <u>Monitoring Methods</u> In lieu of the Monitoring Methods per the HMMP, point-intercept transects have been selected as the most appropriate monitoring method to meet the habitat restoration objectives of the Offsite Mitigation at the Puente Hills Preserve. This method is well suited to measure semiarid shrublands and will provide an efficient and reliable method for estimating cover and species composition of the restoration areas. As documented in a study by Deutschman and Strahm[1] (2008) that compared visual cover estimation, point-intercept transects, and quadrat sampling in coastal sage scrub, chaparral and grassland habitat, the point-intercept transect method was the most accurate and precise method for monitoring species cover. The	

[1] Deutschman, D. and S. Strahm. 2008. Improving Statistical Sampling and Vegetation Monitoring for Open Space in Central Orange County. Report prepared for the Nature Reserve of Orange County. February 2008. 57 pp.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	point-intercept method also efficiently captures the composition and structure of the herbaceous understory in shrublands. Since herbaceous species are typically beneath the shrub canopy layer, cover tends to be underestimated in large sample plots when estimating cover visually. Point-intercept is considered to be the most objective and least biased method for measuring cover compared to visual estimation and line-intercept transects since cover is based simply on whether vegetation touches the sampling bar at a sample point or not (Bonham[2] 1989). The point-intercept method will also more reliably detect interannual changes in cover compared to visual estimation. As documented by Greig-Smith[3] (1983) cover estimates deviated by the group mean by as much as 25% between observers meaning large changes in cover would have to occur before it can attributed to factors other than observer bias. <u>Sample Design and Methods</u> Sampling within the purple sage scrub habitat will be stratified by the restoration areas, with, at minimum,	

[2] Bonham, C.D. 1989. Measurements for Terrestrial Vegetation. New York, NY: John Wiley and Sons.
[3] Greig-Smith, P. (1983). Quantitative Plant Ecology. 3rd edition. Berkeley: University of California Press.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	one point-intercept transect per restoration area. Approximately one transect will be placed for every 2-3 acres, depending on the diversity of site characteristics of restoration areas, including soil type, slope aspect and landscape features that may influence hydrology or infiltration of water. A total of 16 transects will be read in the purple sage scrub habitat. Locations of transects will be determined randomly using a numbered grid system. A 50-meter tape will be stretched taut at the randomly selected locations. Fifty points will be sampled at each transect along the tape at 1-meter intervals starting at 1 meter and ending at 50 meters. A one-meter long, ¼ inch diameter round steel bar will be placed perpendicular to the transect line at each sampling point, consistently on the same side of the tape. All live species that contact the bar, or in the case of overhanging vegetation, intercept the upward projection of the bar, will be counted and recorded. If no vascular plants are intercepted at the sample point, it will be recorded as bare ground or plant litter. Seedlings and juveniles of shrubs, and sub-shrubs will be recorded. Seedlings will be defined as species germinated during the sampling year with a non-woody base and juveniles as individuals germinated within the sampling year with development of woody	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	material at the base. <u>Monitoring Variables</u> Variables for quantitative performance monitoring were selected based on the phenological and establishment-related characteristics of the restoration habitat and the success standards outlined in the HMMP. Variables selected include the absolute cover of native species, exotic species, bare ground and plant litter; species diversity; and survivorship counts of container stock. Cover data will be reported as absolute percent cover determined by dividing the total number of hits for each plant species or ground cover by the total number of points on the transect. Therefore, the total percent reported for absolute cover may be greater than 100 percent because of overlap of plants at each sampling point. Sampling for diversity will consist of listing all the species present along the 50-meter point-intercept transect line and within a 1-meter belt on either side of the transect line. Listing plant species within the 2-meter belt will allow for detection of species that may be missed along the point-intercept transect line. Species diversity will be reported as species richness,	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	the number of species encountered in the line and belt transects. Survivorship of container planted stock will be determined by counting the total number of dead container plants across all restoration areas. Survivorship counts of container stock will be conducted for non-tree mitigation species in the first two years of performance monitoring only. Monitoring and success criteria per the HMMP for tree mitigation species will include survivorship counts along with an assessment on plant health and vigor as described in the HMMP and will be conducted for tree mitigation species in performance monitoring years one through five. <u>Photo Point Monitoring</u> Permanent photo points will be established to conduct photographic documentation of restoration progress and the development of the restoration habitat. Photo points will be established prior to implementation to provide a representative overview before restoration for comparison to "after photos," taken annually during performance monitoring. The geographic coordinates will be recorded using a sub-meter precision global positioning system (GPS) along with the general compass direction for each photo point	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	location. One permanent photo point will be established for each restoration area.	

E. Success Standards		
E1: Success Standards for Mitigation Sites:	Success standards per the HMMP: • Absolute Native Cover Criteria for Vegetation Community Groups Table 8-4 • Success Standards and Adaptive Management Measures for Mitigation Sites Table 8-5 • Success Criteria for Nonnative Cover Table 8-9	
E2: Success Standards for Regulated Tree Mitigation:	Success standards per the HMMP: • Success Standards for Regulated Native Tree Mitigation Table 8-7 • Success Standards and Adaptive Management Measures for Mitigation Sites Table 8-8 • Success Criteria for Nonnative Cover Table 8-9	

Table 1 Purple Sage Scrub Seed Mix – 38.68 Acres			
Scientific Name	**Common Name**	**Minimum Purity/Germination[1]**	**Pounds of Bulk Seed per Acre[2]**
Acmispon glaber[3]	Deerweed	90/60	6.0
Acmispon maritumus[3]	Coastal lotus	98/75	1.0
Artemisia californica	California sagebrush	15/50	1.5
Baccharis pilularis	Coyote brush	2/40	0.1
Dichelostemma capitatum	Blue dicks	90/80	0.25
Deinandra fasciculata[3,4]	Fascicled tarweed	10/25	1.5
Festuca microstachys[3,4]	Small fescue	90/80	6.0
Isocoma menziesii var. vernonioides	Coastal goldenbush	40/30	1.5
Lupinus bicolor[3,4]	Miniature lupine	98/80	3.0
Lupinus succulentus[3,4]	Arroyo lupine	98/85	1.0
Lupinus truncatus[3,4]	Collar lupine	98/85	1.5
Malosma laurina	Laurel sumac	95/60	0.5
Melica imperfecta	Melic grass	90/60	2.0
Phacelia distans[3]	Common phacelia	98/80	1.0
Phacelia ramosissima[3]	Branching phacelia	95/80	0.5
Plantago erecta[3,4]	California plantain	98/75	20.0
Ribes speciosum	Fuchsia flowered gooseberry	N/A	0.2
Salvia apiana	White sage	70/50	1.0
Salvia leucophylla	Purple sage	80/40	2.5
Salvia mellifera	Black sage	70/50	0.25
Sisyrinchium bellum	Blue-eyed grass	95/75	0.5
Solanum douglasii[3]	Douglas' nightshade	90/20	0.1
Stipa pulchra[4,5]	Purple needlegrass	70/60	2.5
		Total Pounds Bulk Seed per Acre	**54.4**
Species Additions for North-, Northwest-, and Northeast-Facing Slopes			
Eriophyllum confertiflorum	Golden yarrow	30/60	1.5
Leymus condensatus	Giant wild rye	80/80	0.5
Mimulus aurantiacus	Sticky monkey flower	5/70	1.0
		Total Pounds Bulk Seed per Acre	**3.0**
Species Additions for South-, Southwest-, and Southeast-Facing Slopes			
Encelia californica	Bush sunflower	40/60	1.0
		Total Bulk Pounds per Acre	**1.0**

[1] Minimum germination may be adjusted after germination tests on special local collection.
[2] Bulk seed rate may be adjusted depending upon results of tests for germination.
[3] Erosion control and nurse crop species
[4] Seed stock verified as collected in Orange or Los Angeles Counties.
[5] Seed of *Stipa* spp. shall be de-awned.
N/A = Information about seed purity and germination not available

Table 2 Purple Sage Scrub Container Plant Palette – 38.68 acres				
Scientific Name	**Common Name**	**Container Size**	**Plant Spacing Within Groups[1] (feet)**	**Plants per Acre**
Baccharis pilularis	Coyote brush	D-40	5′	30
Rhus integrifolia	Lemonade berry	D-40	15’	25
Salvia apiana	White sage	D-40	5′	25
Salvia leucophylla	Purple sage	D-40	5′	150
Sambucus nigra ssp. caerulea	Blue elderberry	D-40	15′	15
			Plants per Acre	**245**
Species Additions for North-, Northwest-, and Northeast-Facing Slopes				
Heteromeles arbutifolia	Toyon	D-40	20′	10
Leymus condensatus	Giant wild rye	D-40	8′	40
Rhamnus ilicifolia	Hollyleaf redberry	D-40	20′	20
			Plants per Acre	**70**
			Total Plants per Acre	**315**
Species Additions for South-, Southwest-, and Southeast- Facing Slopes				
Encelia californica	Bush sunflower	D-40	4’	25
Eriogonum fasciculatum	California buckwheat	1 gallon	4′	35
Opuntia littoralis[2]	Coast prickly pear	1 gallon	4’	30
			Plants per Acre	**90**
			Total Plants per Acre	**335**

[1] Spacing = Feet on-center distance from other container planted shrub/tree species
[2] Plant cactus in groups of 30 (2 groups per acre)

Table 3 Purple Sage Scrub Seed Mix Seeding Only – 38.68 acres			
Scientific Name	**Common Name**	**Minimum Purity/Germination[1]**	**Pounds of Bulk Seed per Acre[2]**
Acmispon glaber[3]	Deerweed	90/60	6.0
Acmispon maritumus[3]	Coastal lotus	98/75	1.0
Artemisia californica	California sagebrush	15/50	1.5
Baccharis pilularis	Coyote brush	2/40	0.1
Dichelostemma capitatum	Blue dicks	90/80	0.25
Deinandra fasciculata[3,4]	Fascicled tarweed	10/25	1.5
Festuca microstachys[3,4]	Small fescue	90/80	6.0
Isocoma menziesii var. vernonioides	Coastal goldenbush	40/30	1.5
Lupinus bicolor[3,4]	Miniature lupine	98/80	3.0
Lupinus succulentus[3,4]	Arroyo lupine	98/85	1.0
Lupinus truncatus[3,4]	Collar lupine	98/85	1.5
Malosma laurina	Laurel sumac	95/60	0.5
Melica imperfecta	Melic grass	90/60	2.0
Phacelia distans[3]	Common phacelia	98/80	1.0
Phacelia ramosissima[3]	Branching phacelia	95/80	0.5
Plantago erecta[3,4]	California plantain	98/75	20.0
Rhus integrifolia	Lemonade berry	90/80	0.1
Ribes speciosum	Fuchsia flowered gooseberry	N/A	0.2
Salvia apiana	White sage	70/50	1.0
Salvia leucophylla	Purple sage	80/40	2.5
Salvia mellifera	Black sage	70/50	0.25
Sambucus nigra ssp. caerulea	Blue elderberry	95/20	0.4
Sisyrinchium bellum	Blue-eyed grass	95/75	0.5
Solanum douglasii[3]	Douglas' nightshade	90/20	0.2
Stipa pulchra[4,5]	Purple needlegrass	70/60	2.5
		Total Pounds Bulk Seed per Acre	**55.0**
Species Additions for North-, Northwest-, and Northeast-Facing Slopes			
Eriophyllum confertiflorum	Golden yarrow	30/60	1.5
Heteromeles arbutifolia	Toyon	95/50	0.5
Leymus condensatus	Giant wild rye	80/80	0.5

Table 3 Purple Sage Scrub Seed Mix Seeding Only – 38.68 acres			
Scientific Name	**Common Name**	**Minimum Purity/Germination[1]**	**Pounds of Bulk Seed per Acre[2]**
Mimulus aurantiacus	Sticky monkey flower	5/70	1.0
Rhamnus ilicifolia	Hollyleaf redberry	95/60	0.2
		Total Pounds Bulk Seed per Acre	**3.7**
Species Additions for South-, Southwest-, and Southeast- Facing Slopes			
Encelia californica	Bush sunflower	40/60	1.0
Eriogonum fasciculatum	California buckwheat	10/65	3.0
Opuntia littoralis[6]	Coast prickly pear	N/A	Pads 4′ o.c.
		Total Pounds Bulk Seed per Acre	**4.0**

[1] Minimum germination may be adjusted after germination tests on special local collection.
[2] Bulk seed rate may be adjusted depending upon results of tests for germination.
[3] Erosion control and nurse crop species
[4] Seed stock verified as collected in Orange or Los Angeles Counties.
[5] Seed of *Stipa* spp. shall be de-awned.
[6] Plant cactus in groups of 30 (2 groups per acre)
N/A = Information about seed purity and germination not available
o.c. = On center

FINAL - Execution Plan for TRTP
Off-Site Mitigation Puente Hills Preserve
Purple Sage Scrub Habitat Restoration

The following tables are from the Habitat Mitigation and Monitoring Plan Segments 7 and 8 Mitigation Measure B-1a Version 4.0 prepared by ICF International for Southern California Edison. The tables show the success criteria for the restoration areas and potential adaptive management measures for implementation to achieve the success standards for the project.

Table 8-4. Absolute Cover Criteria for Vegetation Community Groups

	Target Percent Absolute Cover Monitoring Year				
Vegetation Community Group*	1	2	3	4	5
Woodland Vegetation California Walnut Woodland Coast Live oak Woodland Nonnative Woodland Sycamore Woodland	10	15	20	30	50
Shrub-dominated Vegetation Mixed Chaparral Riversidian Alluvial Fan Sage Scrub Coastal Sage Scrub Mule Fat Scrub	10	20	35	50	60
Riparian Vegetation Freshwater Marsh Ruderal Wetland Southern Coast Live Oak Riparian Forest Southern Cottonwood Willow Riparian	10	20	40	60	80
Herbaceous Vegetation California Annual Grassland	10	15	20	30	35

* Vegetation Community Grouping as presented in the FEIR and FEIS Mitigation Ratio Table

[i]Anthropogenic vegetation will be reseeded with a native seed mix for stabilization purposes.

[ii] Each restoration site is expected to attain the cover requirements for the respective vegetation community group. The success measurements for each independent community will not be averaged for comparison to the success standards.

[iii] Target percent cover criterion at individual sites may be modified based on site-specific conditions that limit the ability of a site to attain the target percent cover specified above. Examples of potential need for modification include a high presence of weeds, or low vegetative cover at the site prior to disturbance, or a high presence of weeds immediately adjacent to the site. Such modification for adjustment will be submitted to the CPUC for approval prior to application.

Table 8-5. Success Standards and Adaptive Management Measures for Mitigation Sites

Milestone	Success Standards	Adaptive Management Measure(s)
120-day plant establishment period	Seeded areas will have sufficient coverage and uniform application. 10% native cover for seeded areas measuring 100 square feet and larger. Container plantings will have 100% survival. Nonnative annual cover cannot exceed 20%. Nonnative perennial species cover cannot exceed 5%.[a]	If success standards are not met, remedial measures may include: • Remedial seeding, • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to site as necessary.
Year 1 through Year 4	Areas will have a minimum native cover as stipulated in Table 8-4. Container plantings will have 80% survival during years 1 and 2. Nonnative annual cover cannot exceed 10%. Nonnative perennial species cover cannot exceed 1%.	If success standards are not met, remedial measures may include: • Remedial seeding, • Adjustments to supplemental watering (through year 3 only), • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to the site as necessary. Beginning in year 3, if the sites are not meeting the vegetation native cover criterion, ocular estimates (as described above under "Biological Monitoring") will be performed of the adjacent similar areas and compared to biological monitoring results from the site.
Year 5	Areas will have a minimum native cover as stipulated in Table 8-4. Nonnative annual cover will be less than 10%. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

[a.] Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

[b.] Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Table 8-7. Success Standards and Adaptive Management Measures for Regulated Native Tree Mitigation

Milestone	Success Standards	Adaptive Management Measure(s)[a]
120-day plant establishment period	Tree species will have 100% survival in Good or Fair condition. Nonnative annual cover cannot exceed 20% within 2 meters of plant trunk. Nonnative perennial species cover cannot exceed 5% within 3 meters of plant trunk.2	If success standards are not met, remedial measures may include: • Plant additional container stock. • Increase supplemental watering. • Increase protection measures against herbivory. • Increase weed abatement activities as necessary. • Other adjustments to site as necessary.
Year 1 through Year 4	Tree species will have 85% survival in Good or Fair condition. Nonnative annual cover cannot exceed 10% within 2 meters of plant trunk. Nonnative perennial species cover cannot exceed 1% within 3 meters of plant trunk.[b]	If success standards are not met, remedial measures may include: ● Plant additional container stock. ● Increase supplemental watering (through year 3 only). ● Increase protection measures against herbivory. ● Increase weed abatement activities as necessary. ● Other adjustments to site as necessary. Beginning in year 3, if the sites are not meeting the vegetation cover criterion, a qualitative assessment will be performed of the adjacent similar areas; the site is considered to have met the success criteria if the qualitative cover of the adjacent similar vegetation is equal to the qualitative cover on the site.
Year 5	Tree species will have 85% survival in Good or Fair condition. Nonnative annual cover will be less than 10% within 2 meters of plant trunk. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

a. Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

b. Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow starthistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Table 8-8. Success Standards and Adaptive Management Measures for Mitigation Sites

Milestone	Success Standards	Adaptive Management Measure(s)
120-day plant establishment period	Seeded areas will have sufficient coverage and uniform application. 10% native cover for seeded areas measuring 100 square feet and larger. Container plantings will have 100% survival. Nonnative annual cover cannot exceed 20%. Nonnative perennial species cover cannot exceed 5%.[b]	If success standards are not met, remedial measures may include: • Remedial seeding, • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to site as necessary.
Year 1 through Year 4	Minimum native cover as stipulated in Table 8-4. Container plantings will have 80% survival (for the first two years). Nonnative annual cover cannot exceed 10%. Nonnative perennial species cover cannot exceed 1%.	If success standards are not met, remedial measures may include: • Remedial seeding, • Adjustments to supplemental watering (through year 3 only), • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to the site as necessary. Beginning in year 3, if the sites are not meeting the native vegetation cover criterion, ocular estimates (as described above under "Biological Monitoring") will be performed of the adjacent similar areas and compared to biological monitoring results from the site.
Year 5	Minimum native cover as stipulated in Table 8-4. Nonnative annual cover will be less than 10%. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

a. Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

b. Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

* Refer to Table 8-4 for vegetation cover criteria for respective vegetation community cover groups.

Table 8-9. Success Criteria for Nonnative Cover

	Target Nonnative Percent Cover Monitoring Year				
Nonnative Cover Type*	1	2	3	4	5
Nonnative annual cover	20	10	10	10	10
Nonnative perennial cover[a]	5	1	1	1	0

[a] Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Note: Each independent nonnative cover type is expected to not exceed target percentage requirements for the respective cover type (annual/perennial). The success data measurements for each independent nonnative cover type will not be averaged for comparison to the success standards.

FINAL - Execution Plan for TRTP
Off-Site Mitigation Puente Hills Preserve
Sagebrush Scrub Habitat Restoration

Project Details	
Site Visit Date:	July 6, 10, 13, and 16, 2015
Segment Number:	8 - Off-site Mitigation Puente Hills Preserve Powder Canyon
Restoration Area:	PH4, PH5, PH11, PH14
Restoration Site Number:	PH4-1 SS, PH 4-2 SS, PH5-1 SS, PH11-1 SS, PH11-2 SS, PH14-1 SS
Restoration Activity Level:	4 – Weed control, hydroseeding/container planting throughout, supplemental irrigation throughout
Restoration Habitat Type:	Sagebrush Scrub

A. General Site Description	
A1: Location:	La Habra Heights, California Puente Hills Preserve - See Figure 1 for overview of all Mitigation Areas. See Figure 5 for PH4, Figure 6 for PH5, Figure 12 for PH11, Figure 15 for PH14
A2: Access:	Gate at Powder Canyon Trailhead Parking Lot off of Fullerton Road; Gate at end of Skyline Drive
A3: Area:	14.32 acres
A4: Existing Infrastructure:	Maintained fire roads
A5: Jurisdictional Features:	No
A6: Environmental Sensitive Area:	California gnatcatcher critical habitat areas adjacent to restoration sites. • Environmental Awareness training for sensitive bird species will be conducted for restoration contractor personnel prior to initiation of work.

A. General Site Description	
	• Initial site clearing and plant material installation will be done outside of the breeding season. Majority of maintenance activities, weeding and irrigation will be done outside of the breeding season. • A 200-foot buffer will be established around identified California gnatcatcher nests and territories. Work will be avoided in buffer areas until young have fledged the nest. A 200 foot buffer is an acceptable buffer per the Technical Guidance from the United States Fish and Wildlife Service for restoration activities within the Puente Hills Preserve. • Impacts to existing native vegetation during restoration work will be avoided.
A7: Protective Measures for Nesting Avian Species:	• Environmental Awareness training will be conducted for restoration contractor personnel prior to initiation of work. • Initial site clearing and plant material installation will be done outside of the breeding season. Majority of maintenance activities, weeding and irrigation will be done outside of the breeding season. • 50-foot buffer for any nesting activity • 300-foot buffer for nesting raptors; or as determined appropriate by the Project Biologist • An appropriate and protective buffer will be established for Migratory Bird Treaty Act protected non-game species.
A8: Special-Status Plant Mitigation:	No
A9: Tree Mitigation:	Yes; blue elderberry and toyon

B. Physical Characteristics of Restoration Area	
B1: Topography:	0° to 38° slopes
B2: Aspect:	All aspects, majority of restoration areas east to southeast aspect
B3: Elevation:	740 feet to 1,300 feet
B4: Soils:	Clay loam
B5: Surface Rock and Rockiness:	Surface gravels present and minimal rock outcrops on site
B6: Existing Erosion and Sediment Control BMPs:	None
B7: Weed Percent Cover:	80 – 100%
B8: Dominant Weed Species:	Non-native annual grasses, black mustard (*Brassica nigra*)

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
C1: Staging and Access:	All site work, staging, parking and access shall be restricted to the areas shown on Figure 1	
C2: Adaptive Management:	Adaptive Management Measures will be implemented per the HMMP as described in Chapter 8. Adaptive Management Measures to be implemented are provided in the following sections in the event drought conditions persist and if water supply is restricted by local or state regulations.	Adaptive Management includes the following remedial measures; weed eradication, replacement of container plantings, increased watering, herbivory protection, access restriction measures, and/or reseeding in areas to meet performance standards. Table 8-5, 8-7, and 8-8 shows success criteria and remedial actions to facilitate achieving success standards. Such actions will be taken promptly upon identification of problems and will be implemented as necessary. The Restoration Ecologist (RE) shall approve all remedial measures prior to implementation. If monitoring indicates the mitigation will not meet the success standards at the end of the five year monitoring period, SCE with assistance from the RE will perform analysis to determine which factors are contributing to the condition of the site and propose remedial actions to achieve success standards. If necessary, the RE will develop a remediation plan with approval of SCE immediately following indication the site will not meet success criteria (Table 8-4, 8-5, 8-7, 8-8, and 8-9).

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
C3: Site Preparation		
Recontouring:	None	
Decompaction:	None	
Site Preparation Weed Control:	12 months of site preparation weed control between January and December and continuing if necessary until plant material installation with an irrigated grow-and-kill program. A minimum of three irrigated grow-and-kill events to ensure weed control of early, mid, and late season weed species. Timing shall be scheduled to target optimal weed control and weed removal shall be completed prior to seed set. Weed control methods shall include herbicide application and/or mechanical mowing/cutting. If drought conditions persist and water supply is restricted by local or state regulations grow-and-kill cycles will rely on natural rainfall to promote germination of weed species. Per the HMMP, success of the grow-and-kill cycles will be evaluated by the Restoration Contractor and Restoration Ecologist to determine the need for additional cycles. The grow-and-kill period may be extended until effective weed control is accomplished since natural rainfall driven grow-and-kill programs may require more cycles to equal the control of an irrigated grow-and-kill	The RE shall review weed control methods prior to implementation. The Restoration Contractor (RC) shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: initial site clearing timing and method; Grow-and-kill irrigation timing and duration; Grow-and-kill weed control timing, methods, and weeds controlled. Restoration sites shall be maintained free of trash, microtrash, and debris. The RC will make all reasonable efforts to remove trash and debris from every restoration site prior to installation and throughout the five-year maintenance period. Material will be properly disposed of off-site. Weeded material will be collected and properly disposed of off-site.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	program. If annual rainfall is significantly below average, then additional grow-and-kill cycles extending into the next season may be necessary. Prior to installation the restoration area will be cleared of all weed thatch to facilitate seed/soil contact.	Weed control shall occur in a 5 to 20-foot weed buffer adjacent to portions of Restoration Area PH4, PH5, PH11, and PH14 (approximately 1.25 acres) dominated by exotic species and is determined to be a weed seed source. Weed control methods shall consist of mowing non-native grasses and mustard species and selective use of herbicide for invasive species.
C4: Planting and Seeding		
Target Vegetation Community:	Sagebrush Scrub	
Sources of Plant Material:	To the extent possible, all plant material shall be obtained from native plant communities growing within the Puente Hills Preserve. For those species that function as erosion control or do not exist in large enough quantities within the Preserve, it will be necessary to either a) use seed stock from a seed collector/supplier that can be verified as collected within Los Angeles or Orange counties or b) extend the collection area on a species-by-species basis. Seed collection shall be as close as possible to the Preserve to maintain genetic integrity in nearby open space areas such as Chino Hills State Park and Peter F. Schabarum Regional Park or other appropriate inland areas in Los Angeles and Orange Counties.	The RC shall be responsible for obtaining seed from seed supplier. Seed tags indicating the Pure Live Seed (PLS) and Bulk rate must be attached to each bag of seed and provided to the RE.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
Methods of Propagation:	Container plants shall be contract grown by a nursery that has experience in growing native plants using propagules collected from approved sites as specified in the HMMP.	The RC shall contract with a plant nursery specializing in native plant propagation. Container plants will be contract grown by a nursery with at least three years of experience growing native plants from the target vegetation communities of the project area. The order shall be placed so that the plants have a well-developed root system and are conditioned prior to planting in Fall/Winter. Arbuscular mycorrhizal inoculum will be purchased and incorporated with the greenhouse mix according to the label at the time of transplantation to containers. The RC and RE will inspect all container plants during the growing stage and upon delivery for planting to verify the plants are the correct species and quantities, are free of weeds, pests, and disease, and showing signs of healthy growth. Plants shall be grown in the specified container long enough to develop a root system that reaches the bottom of the container and forms a healthy root ball without becoming root bound. Any container plants that are not within these standards will be rejected.
Soil Amendments:	Endomycorrhizal inoculum shall be added to the hydroseed mix as specified in the HMMP.	Arbuscular mycorrhizal inoculum shall be added to the hydroseed mix at a rate of 60

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	A fertilizer packet (10 grams weight) shall be added at the bottom of each planting hole prior to planting container plants. Each packet shall contain nitrogen, available phosphoric acid and soluble potash plus minor nutrients. The nitrogen, phosphorus, and potassium shall be coated with a polyurethane coating to provide 15.69 percent coated slow-release nitrogen, 5.09 percent coated slow-release available phosphate, and 6.8 percent slowly available soluble potash. Bio Paks® meeting these specifications are available from Reforestation Technologies Inc.	pounds per acre (approximately 3,600,000 live propagules per acre) based on the guarantee of the supplier. The supplier shall be a person or company with experience in Arbuscular mycorrhizal development. Commercially available *Glomus intraradices* is recommended since this is an ubiquitous species and will not impede the development of other native Arbuscular mycorrhizal species.
Seeding Method:	Two-step hydroseed application as specified in the HMMP in the Fall/Winter prior to container plant installation. The sagebrush scrub seed mix is provided in Table 1.	The RC shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: Hydroseeding date(s) and seed mix applied for each restoration area. Prior to seeding, the restoration area will be cleared of all weed thatch to facilitate seed/soil contact. All hydroseed mixing shall be performed in a clean tank. The hydroseeder must be equipped with a continuous agitation and recirculation system to produce a uniform slurry and have the capacity to apply this slurry in a sweeping

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		motion at a continuous rate. The RC shall spray designated areas with the slurry in a sweeping motion and in an arched stream until a uniform coat is achieved. The seed mix will be applied using a two-step hydroseed application. ***First Application*** The hydroseed mixture must be applied within one hour of preparation. • 500 pounds (lbs)/acre of virgin cellulose wood fiber • 60 lbs/acre of Arbuscular mycorrhizal inoculum • Specified seed mix ***Second Application*** The second application shall occur within two hours following completion of the first application. • 1,500 lbs/acre of virgin cellulose wood fiber • 160 lbs/acre of organic M-binder (Ecology Control or comparable product)

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
Container Planting:	Container plant installation shall be in the Fall/Winter as specified in the HMMP following hydroseed application planted in groups at the specified spacing and aspect shown in Table 2.	The RC shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: quantity of container plants per species installed in each restoration area. The RE will inspect and approve all container plants prior to planting to verify the plants are the correct species and quantities, are free of weeds, pests, and disease, and showing signs of healthy growth. Any container plants that are not within these standards will be rejected. Plant layout will be determined based on micro topographic features and planting sites will be marked on site using colored pin flags by the RC under the supervision of the RE. Upon plant delivery, container plants shall be stored in a designated temporary storage location. The RC is responsible for protection from herbivory, vandalism or theft, as well as maintenance (watering) of the plants while they are in temporary storage. All container plants shall be planted in accordance with the following specifications • Plants shall be planted with the roots untangled. Roots shall be protected

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		from weather exposure during planting. • Planting holes shall be augured and be no more than 1.5 times the diameter and 2 times the depth of the container species to be planted. • Planting holes shall be backfilled 25 percent with excavated native soil and filled with water and allowed to drain completely prior to planting. Container plants must never be installed in planting holes with standing water; all water shall be allowed to settle and infiltrate through the soil prior to plant installation. • The specified fertilizer packet shall be added to each planting hole just prior to planting. • Plantings shall be set in well-drained planting holes with the crown of the root ball no more than 0.5 inches above grade. Under no circumstances should the plant crown be buried. The soil around the planting shall be tamped down sufficiently to eliminate any air pockets in the soil. • A basin around the planting shall be

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		constructed by creating a berm above the existing grade approximately 24 inches in diameter around the planting. • Each planting shall be sufficiently watered after installation so that water reaches the lower roots.
C5: Irrigation		
Water Source:	1) La Habra Heights Water District – water tank 2) La Habra Heights Water District – backflow device	
Irrigation System:	A temporary overhead irrigation system shall be installed with the following design: • A mainline with lateral lines will be installed with gate-valves to separately manage the areas, as necessary depending on site soils and landforms. • Lateral lines shall be laid out along the contour of slopes so that the top of the slope can be managed separately from the lower slope. • Sprinkler heads shall be sized to accommodate the infiltration rate of the soil and landscape position. The size of the sprinkler heads and application rate will be determined after infiltration is evaluated in each area. • The system shall be laid out so that the wetted area from each sprinkler head has no more than a two-	The RE shall approve the irrigation design, layout, and schedules prior to installation of the system and implementation of watering events. Portable booster pumps may be necessary to pump water to upper portions of the restoration areas. Each pump shall have containment surrounding them and only operated when a member of the RC crew is on-site. **Alternate Temporary Irrigation System** If drought conditions persist and water supply is restricted by local or state regulations, the irrigation system will supply irrigation for the

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	to three-foot overlap with adjacent sprinklers. The final layout design will depend on the system water pressure and the size of the sprinkler heads (based on the infiltration rate of the soil). • All sprinkler stems shall be fitted with on/off ball valves to allow for hose connections and hand watering of container plants at installation and during establishment, as necessary. These valves will also allow particular areas to be shut-off, as necessary. • Operation of the system will require management by a person with demonstrated previous experience irrigating native vegetation. Under no circumstances will the irrigation system be operated with any type of automatic timer. The system will be run manually and only when at least one restoration contractor crew person is on site. If drought conditions persist and water supply is restricted by local or state regulations, container plants will be planted in large groups and irrigation will be applied by micro sprinklers in the planted groups only. If drought conditions persist and water supply is severely restricted by local or state regulation,	container plants only and shall be installed with the following design: ***Container Plant Groups*** • A mainline with lateral lines will be installed with gate-valves to separately manage the areas, as necessary depending on site soils and landforms. • PVC lateral lines shall be laid out from the mainline to each container plant group • Low precipitation rate rotary nozzles on risers shall be installed within each container plant group. Nozzles will be installed to water only the container planting group. The application rate will be determined after infiltration is evaluated for each area. • The system shall be laid out so that the wetted area from each low precipitation rate rotary nozzle head has slight overlap with adjacent nozzles. The final layout design will depend on the system water pressure (based on the infiltration rate of the soil). • All sprinkler stems shall be fitted with

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	restoration areas will be hydroseeded only following the two-step method as specified in the HMMP. Seeded areas will not be irrigated and will rely on natural rainfall for establishment. Coast prickly pear will be planted as pad material. See Table 3 for the sagebrush scrub seed mix if seeding only.	on/off valves to allow for hose connections and hand watering of container plants at installation and during establishment, as necessary. These valves will also allow particular areas to be shut-off, as necessary. • Operation of the system will require management by a person with demonstrated previous experience irrigating native vegetation. Under no circumstances will the irrigation system be operated with any type of automatic timer. The system will be run manually and only when at least one restoration contractor crew person is on site.
Irrigation Timing:	The temporary irrigation system shall provide supplemental irrigation between early fall and late spring to extend the rainy season during the first two years of establishment as necessary for plant establishment. Irrigation events will depend on evapotranspiration between irrigation events and soil moisture. Irrigation will consist of wetting the soil to full field capacity (18 inches after planting; and 18-24 inches	Irrigation shall be implemented as needed to supplement or mimic natural rainfall patterns in such a way that the plants develop deep root systems to maximize survival and vigor after irrigation is removed. The RC shall be responsible for inspection and timely repair of any irrigation deficiency. The RC shall consult with RE to determine if extending or revising the watering schedule is necessary. Watering of restoration sites will be gradually reduced as

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	during plant establishment). After adequate germination of the seed mix, the soil shall be allowed to dry down to approximately 50 to 60 percent of field capacity in the upper 6 to 12 inches of soil before the next irrigation event.	the plantings become established and mature, and will be discontinued at least two years prior to final acceptance and approval of the restoration site.
C6: Erosion and Sediment Control		
Erosion and Sediment Control BMPs:	No grading or ground disturbance will be performed; weeded areas will be hydroseeded and planted prior to the onset of the rainy season per BMP.	Erosion control measures will only be installed as needed with the approval of the RE.
C7: Maintenance Recommendations		
Weed Control Timing:	Weeds shall be controlled, as necessary, before they set seed and/or before they reach 12 inches in height. The majority of the weed control effort will be required during winter through early summer. The number of maintenance visits shall be determined by need. Approximately four maintenance events shall be estimated for a normal rainfall season with greater or fewer weed events as dictated by fluctuations in rainfall timing and amount.	Nonnative plants will be suppressed for the duration of the maintenance and monitoring period throughout the restoration sites to achieve the nonnative cover Success Criteria presented in Table 8-9. Weed control activities shall include weed control throughout the restoration sites and within the planting basins. All planting basins, or an area 3 feet in diameter around each plant, will be maintained free of weeds during the duration of the maintenance period. Weed control in the weed buffer areas shall be implemented as necessary and shall be timed to control weed species prior to seed-set.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
Weed Control Methods:	Weed control methods will include mainly hand-pulling and limited selective spot spraying of herbicides for high priority invasive species that may re-sprout from taproots or rhizomes. Limited use of selected herbicides is specified when no other effective alternative is available to remove and control weed species and will be authorized only by the Project Restoration Ecologist. Pre-emergent chemicals shall not be used at any time in the restoration process.	The RE shall review weed control methods prior to implementation. Productive plant materials containing viable seed shall be bagged, removed from the site, and disposed of at an approved location. Weeded material will be collected and properly disposed of off-site. Installed plant material and native plant volunteers shall not be damaged by weed control operations. ***Hand-pulling*** Shall be performed by hand-pulling or using hand tools. Weed removal shall not cause disruption to the root system or the above-ground structure of native plants. ***Herbicide application*** Herbicide control and herbicide product shall be approved by the RE prior to use. All herbicides shall be applied in accordance with all state and federal regulations and manufacturer's instructions by a Licensed Qualified Applicator under the direction of a Pest Control Advisor (PCA). Herbicides shall not be applied during or within 72 hours of a rain event, or when wind velocities exceed five

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		miles per hour. Care will be taken to avoid spraying native species. Herbicide will be applied in a manner that minimizes drip and drift into adjacent areas. At no time shall herbicides be used to control weeds within planting basins. Weed control in weed buffer areas will consist of mowing non-native annual grasses and mustard species and selective use of herbicide for invasive species.
Protective Fencing:	Protective fencing shall be placed along public trails consisting of metal T-bar posts at 30-foot intervals with bright yellow rope attached at a height of approximately four feet. All-weather and graffiti protected signs shall be placed at a few key locations along the fencing with information explaining the sensitivity of the restoration area. The fence will serve as an effective barrier/deterrent to humans without inhibiting wildlife.	
Plant Replacement:	Re-seeding and container plant replacement shall occur per the HMMP if success standards are not met. Per the HMMP Chapter 8 Success Standards for Native Trees page 8-32 and 8-33, tree mitigation species will be over planted during implementation to allow for plant loss during establishment. Overplanting during	The RC is responsible for supplemental planting and seeding to achieve specified success requirements, except in those instances where the failure of the restoration areas to meet the survival and cover requirements is due to something beyond the control of the RC (catastrophic events such as

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	initial installation will maximize establishment time for tree mitigation species and reduce or eliminate the need for plant replacement later in the restoration process. The following target numbers were determined for tree mitigation species and plant replacement will occur if survivorship falls below the target number. As such, the regulated tree mitigation survival criterion will apply to the target number. *Blue Elderberry* The target number for blue elderberry across all restoration areas is 322, the required tree mitigation number plus a 20 percent contingency. The target number of blue elderberry in the sagebrush scrub restoration areas is 63. The target number is derived by multiplying the percentage of blue elderberry to be planted in the sagebrush scrub restoration areas (19.7%) by the target number (322). *Toyon* The target number for toyon across all restoration areas is 60, the required tree mitigation plus a 20 percent contingency. The target number of toyon in the sagebrush scrub restoration areas is 9, derived by multiplying the percentage of toyon to be planted in the sagebrush scrub restoration areas (15%) by the target number (60).	flood, fire, etc.). In these circumstances, it would be the financial responsibility of Southern California Edison (SCE), the mitigation sponsor, to provide the supplemental materials. As specified in Mitigation Measure B-1a, if a fire occurs in a revegetation area during the monitoring period, SCE shall be responsible for a one-time replacement. Re-seeding may be prescribed as a remedial measure if the target percent absolute native cover is not met during the 120-day plant establishment period and maintenance/monitoring years 1 through 5. Re-seeding may be prescribed in areas 100 square feet or greater not meeting the minimum cover requirement observed during monitoring visits. Reseeded areas must achieve an equivalent native species cover as the surrounding restored habitat by the end of the five-year maintenance/monitoring period based on performance monitoring described in Section D Restoration Site Maintenance and Biological Monitoring. See Table 8-4 for Absolute Cover Criteria for Vegetation Community Groups and Table 8-5, 8-7, and 8-8

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		for Success Standards and Adaptive Management Measures. Re-seeding shall be implemented by broadcast seeding. Seed may be broadcast onto the site by hand or using a hand-crank spreader. Seed will be premixed with dispersal agent (such as wheat bran) at approximately 25 percent of the overall volume. Prior to seeding the site may be watered to saturate the surface soil to aid in seed adhesion to the soil surface. Seed shall be mixed with a carrier as stated above, and divided into two equal parts. Half of the seed shall be hand-broadcast by walking across the entire area in a linear orientation appropriate for the site. The remaining half of the seed shall be hand-broadcast by walking across the site perpendicular to the first application. Seed areas shall be lightly raked to incorporate seeds into the soil. All replacement planting shall be in-kind unless otherwise specified by the RE. If adjustments to species for replacement planting are determined necessary by the RE, the replacement species must be on the approved plantings list for the associated habitat, and

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		replacements be approved by SCE, and documented in the maintenance inspection logs. Container plant replacement will occur for non-tree mitigation species during the following phases: **120-day plant establishment period** Container plants (non-tree mitigation species) will have 100% survival following the 120-day plant establishment period. All failed container plants will be replaced during this phase of restoration. **Maintenance/Monitoring Years 1 and 2** Container plants (non-tree mitigation species) will have 80% survivorship in years 1 and 2. Failed container plants will be replaced as necessary to achieve 80% survivorship.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
D1: Maintenance		
Responsible Party	Restoration Contractor	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
120-day Plant Establishment Period	Weekly visits to maintain installed plant material. Weed control and irrigation as needed.	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration area: irrigation timing/duration; weed event timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species. See Table 8-5, 8-7, and 8-8 for Success Standards Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial measures if success standards are not met. Restoration sites shall be maintained free of trash, microtrash, and debris. The RC will make all reasonable efforts to remove trash and debris from every restoration site prior to installation and throughout the five-year maintenance period. Material will be properly disposed of off-site.
Year 1 and 2	Timing for weed control will depend on annual weather patterns and may vary by year during the maintenance period with the most intense weeding maintenance in the first and second year.	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration area: irrigation timing/duration; weed event

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	Approximately four maintenance events shall be estimated for a normal rainfall season with greater or fewer weed events as dictated by fluctuations in rainfall timing and amount. Irrigation will be timed to extend the rainy season in the fall and the spring during the first two years of establishment. Irrigation events will depend on evapotranspiration between irrigation events and soil moisture. If drought conditions persist and water supply is restricted by local or state regulations and the restoration areas are seeded only, no supplemental irrigation will be required and plant material will rely on natural rainfall for establishment.	timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species. Weed control in the weed buffer areas shall be implemented as necessary and shall be timed to control weed species prior to seed-set. See Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial measures if success standards are not met.
Year 3 through 5	Seasonal limited spot weeding of select invasive species will be implemented as necessary in years three through five to control weed species while minimizing disturbance to the restoration area.	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration area: irrigation timing/duration; weed event timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species. Weed control in the weed buffer areas shall be

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		implemented as necessary and shall be timed to control weed species prior to seed-set. See Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial measures if success standards are not met. The RC will be responsible for removing the irrigation system following final acceptance and approval of the restoration sites.
D2: Maintenance Monitoring		
Responsible Party	Restoration Ecologist	
120-day Plant Establishment Period	Weekly visits in the first month following installation and every two weeks in months two and three	
Quarterly Monitoring	Four visits per year in maintenance and monitoring Year 1 through Year 3 (following the 120-day plant establishment period). Timing will vary depending on annual weather patterns.	
Semi-annual Monitoring	Two visits per year in maintenance and monitoring Year 4 and Year 5. Timing will vary depending on annual weather patterns.	
D3: Biological Monitoring		

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
Responsible Party	Restoration Ecologist	
Annual Monitoring	Performance monitoring will be conducted annually in maintenance and monitoring Years 1 through 5 in the spring. Timing will vary depending on annual weather patterns. <u>Monitoring Methods</u> In lieu of the Monitoring Methods per the HMMP, point-intercept transects have been selected as the most appropriate monitoring method to meet the habitat restoration objectives of the Offsite Mitigation at the Puente Hills Preserve. This method is well suited to measure semiarid shrublands and will provide an efficient and reliable method for estimating cover and species composition of the restoration areas. As documented in a study by Deutschman and Strahm[1] (2008) that compared visual cover estimation, point-intercept transects, and quadrat sampling in coastal sage scrub, chaparral and grassland habitat, the point-intercept transect method was the most accurate and precise method for monitoring species cover. The point-intercept method also efficiently captures the composition and structure of the herbaceous	

[1] Deutschman, D. and S. Strahm. 2008. Improving Statistical Sampling and Vegetation Monitoring for Open Space in Central Orange County. Report prepared for the Nature Reserve of Orange County. February 2008. 57 pp.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	understory in shrublands. Since herbaceous species are typically beneath the shrub canopy layer, cover tends to be underestimated in large sample plots when estimating cover visually. Point-intercept is considered to be the most objective and least biased method for measuring cover compared to visual estimation and line-intercept transects since cover is based simply on whether vegetation touches the sampling bar at a sample point or not (Bonham[2] 1989). The point-intercept method will also more reliably detect interannual changes in cover compared to visual estimation. As documented by Greig-Smith[3] (1983) cover estimates deviated by the group mean by as much as 25% between observers meaning large changes in cover would have to occur before it can attributed to factors other than observer bias. <u>Sample Design and Methods</u> Sampling within the sagebrush scrub habitat will be stratified by the restoration areas, with, at minimum, one point-intercept transect per restoration area. Approximately one transect will be placed for every 2-3 acres, depending on the diversity of site	

[2] Bonham, C.D. 1989. Measurements for Terrestrial Vegetation. New York, NY: John Wiley and Sons.
[3] Greig-Smith, P. (1983). Quantitative Plant Ecology. 3rd edition. Berkeley: University of California Press.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	characteristics of restoration areas, including soil type, slope aspect and landscape features that may influence hydrology or infiltration of water. A total of 6 transects will be read in the sagebrush scrub habitat. Locations of transects will be determined randomly using a numbered grid system. A 50-meter tape will be stretched taut at the randomly selected locations. Fifty points will be sampled at each transect along the tape at 1-meter intervals starting at 1 meter and ending at 50 meters. A one-meter long, ¼ inch diameter round steel bar will be placed perpendicular to the transect line at each sampling point, consistently on the same side of the tape. All live species that contact the bar, or in the case of overhanging vegetation, intercept the upward projection of the bar, will be counted and recorded. If no vascular plants are intercepted at the sample point, it will be recorded as bare ground or plant litter. Seedlings and juveniles of shrubs, and sub-shrubs will be recorded. Seedlings will be defined as species germinated during the sampling year with a non-woody base and juveniles as individuals germinated within the sampling year with development of woody material at the base. <u>Monitoring Variables</u>	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	Variables for quantitative performance monitoring were selected based on the phenological and establishment-related characteristics of the restoration habitat and the success standards outlined in the HMMP. Variables selected include the absolute cover of native species, exotic species, bare ground and plant litter; species diversity; and survivorship counts of container stock. Cover data will be reported as absolute percent cover determined by dividing the total number of hits for each plant species or ground cover by the total number of points on the transect. Therefore, the total percent reported for absolute cover may be greater than 100 percent because of overlap of plants at each sampling point. Sampling for diversity will consist of listing all the species present along the 50-meter point-intercept transect line and within a 1-meter belt on either side of the transect line. Listing plant species within the 2-meter belt will allow for detection of species that may be missed along the point-intercept transect line. Species diversity will be reported as species richness, the number of species encountered in the line and belt transects.	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	Survivorship of container planted stock will be determined by counting the total number of dead container plants across all restoration areas. Survivorship counts of container stock will be conducted for non-tree mitigation species in the first two years of performance monitoring only. Monitoring and success criteria per the HMMP for tree mitigation species will include survivorship counts along with an assessment on plant health and vigor as described in the HMMP and will be conducted for tree mitigation species in performance monitoring years one through five. <u>Photo Point Monitoring</u> Permanent photo points will be established to conduct photographic documentation of restoration progress and the development of the restoration habitat. Photo points will be established prior to implementation to provide a representative overview before restoration for comparison to "after photos," taken annually during performance monitoring. The geographic coordinates will be recorded using a sub-meter precision global positioning system (GPS) along with the general compass direction for each photo point location. One permanent photo point will be established for each restoration area.	

E. Success Standards		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
E1: Success Standards for Mitigation Sites:	Success standards per the HMMP: • Absolute Native Cover Criteria for Vegetation Community Groups Table 8-4 • Success Standards and Adaptive Management Measures for Mitigation Sites Table 8-5 • Success Criteria for Nonnative Cover Table 8-9	
E2: Success Standards for Regulated Tree Mitigation:	Success standards per the HMMP: • Success Standards for Regulated Native Tree Mitigation Table 8-7 • Success Standards and Adaptive Management Measures for Mitigation Sites Table 8-8 • Success Criteria for Nonnative Cover Table 8-9	

Table 1 Sagebrush Scrub Seed Mix – 14.32 acres			
Scientific Name	**Common Name**	**Minimum Purity/Germination[1]**	**Pounds of Bulk Seed per Acre[2]**
Acmispon glaber[3]	Deerweed	90/60	6.0
Artemisia californica	California sagebrush	15/50	2.5
Baccharis pilularis	Coyote brush	2/40	0.1
Deinandra fasciculata[3,4]	Fascicled tarweed	10/25	1.5
Eriogonum fasciculatum	California buckwheat	10/65	3.0
Festuca microstachys[3,4]	Small fescue	90/80	6.0
Isocoma menziesii vernonioides	Coastal goldenbush	40/30	1.5
Lupinus bicolor[3,4]	Miniature lupine	98/80	3.0
Lupinus succulentus[3,4]	Arroyo lupine	98/85	1.0
Lupinus truncatus[3,4]	Collar lupine	98/85	1.5
Malosma laurina	Laurel sumac	95/60	0.5
Melica imperfecta	Melic grass	90/60	1.0
Phacelia distans[3]	Common phacelia	98/80	1.0
Phacelia ramosissima[3]	Branching phacelia	95/80	0.5
Plantago erecta[3,4]	California plantain	98/75	20.0
Pseudonaphalium californicum	California everlasting	5/40	0.5
Salvia apiana	White sage	70/50	1.0
Salvia leucophylla	Purple sage	80/40	0.5
Salvia mellifera	Black sage	70/50	0.5
Solanum douglasii[3]	Douglas' nightshade	90/20	0.1
Stipa lepida[4,5]	Foothill needlegrass	70/60	2.0
Stipa pulchra[4,5]	Purple needlegrass	70/60	2.0
		Total Pounds Bulk Seed per Acre	**55.7**
Species Additions for North-, Northwest-, and Northeast-Facing Slopes			
Eriophyllum confertiflorum	Golden yarrow	30/60	1.5
Leymus condensatus	Giant wild rye	80/80	1.0
Mimulus aurantiacus	Sticky monkey flower	5/70	1.5
		Total Pounds Bulk Seed per Acre	**4.0**
Species Additions for South-, Southwest-, and Southeast-Facing Slopes			
Encelia californica	Bush sunflower	40/60	1.0
		Total Pounds Bulk Seed per Acre	**1.0**

[1] Minimum germination may be adjusted after germination tests on special local collection.
[2] Bulk seed rate may be adjusted depending upon results of tests for germination.
[3] Erosion control and nurse crop species
[4] Seed stock verified as collected in Orange or Los Angeles Counties.
[5] Seed of *Stipa* spp. shall be de-awned.

N/A = Information about seed purity and germination not available

Table 2 Sagebrush Scrub Container Plant Palette – 14.32 acres				
Scientific Name	**Common Name**	**Container Size**	**Plant Spacing Within Groups[1] (feet)**	**Plants per Acre**
Baccharis pilularis	Coyote brush	D-40	5′	30
Eriogonum fasciculatum	California buckwheat	1 gallon	4′	50
Rhus integrifolia	Lemonade berry	D-40	15’	25
Salvia apiana	White sage	D-40	5′	30
Salvia leucophylla	Purple sage	D-40	5′	30
Sambucus nigra ssp. caerulea	Blue elderberry	D-40	15′	15
			Plants per Acre	**180**
Species Additions for North, Northwest, and Northeast Facing Slopes				
Heteromeles arbutifolia	Toyon	D-40	20′	10
Leymus condensatus	Giant wild rye	D-40	8′	40
Rhamnus ilicifolia	Hollyleaf redberry	D-40	20′	20
			Plants per Acre	**70**
			Total Plants per Acre	**250**
Species Additions for South, Southwest, and Southeast Facing Slopes				
Encelia californica	Bush sunflower	D-40	4′	30
Opuntia littoralis[2]	Coast prickly pear	1 gallon	4’	60
			Plants per Acre	**90**
			Total Plants per Acre	**270**

[1] Spacing = Feet on-center distance from other container planted shrub/tree species
[2] Plant cactus in groups of 30 (2 groups per acre)

Table 3 Sagebrush Scrub Seed Mix Seeding Only – 14.32 acres			
Scientific Name	**Common Name**	**Minimum Purity/Germination[1]**	**Pounds of Bulk Seed per Acre[2]**
Acmispon glaber[3]	Deerweed	90/60	6.0
Artemisia californica	California sagebrush	15/50	2.5
Baccharis pilularis	Coyote brush	2/40	0.1
Deinandra fasciculata[3,4]	Fascicled tarweed	10/25	1.5
Eriogonum fasciculatum	California buckwheat	10/65	3.0
Festuca microstachys[3,4]	Small fescue	90/80	6.0
Isocoma menziesii vernonioides	Coastal goldenbush	40/30	1.5
Lupinus bicolor[3,4]	Miniature lupine	98/80	3.0
Lupinus succulentus[3,4]	Arroyo lupine	98/85	1.0
Lupinus truncatus[3,4]	Collar lupine	98/85	1.5
Malosma laurina	Laurel sumac	95/60	0.5
Melica imperfecta	Melic grass	90/60	1.0
Phacelia distans[3]	Common phacelia	98/80	1.0
Phacelia ramosissima[3]	Branching phacelia	95/80	0.5
Plantago erecta[3,4]	California plantain	98/75	20.0
Pseudonaphalium californicum	California everlasting	5/40	0.5
Rhus integrifolia	Lemonade berry	90/80	0.5
Salvia apiana	White sage	70/50	1.0
Salvia leucophylla	Purple sage	80/40	0.5
Salvia mellifera	Black sage	70/50	0.5
Sambucus nigra ssp. caerulea	Blue elderberry	95/20	0.5
Solanum douglasii[3]	Douglas' nightshade	90/20	0.1
Stipa lepida[4,5]	Foothill needlegrass	70/60	2.0
Stipa pulchra[4,5]	Purple needlegrass	70/60	2.0
		Total Pounds Bulk Seed per Acre	**56.7**
Species Additions for North-, Northwest-, and Northeast-Facing Slopes			
Eriophyllum confertiflorum	Golden yarrow	30/60	1.5
Heteromeles arbutifolia	Toyon	95/50	0.5
Leymus condensatus	Giant wild rye	80/80	1.0
Mimulus aurantiacus	Sticky monkey flower	5/70	1.5
Rhamnus ilicifolia	Hollyleaf redberry	95/60	0.2
		Total Pounds Bulk Seed per Acre	**4.7**

Table 3 Sagebrush Scrub Seed Mix Seeding Only – 14.32 acres			
Scientific Name	**Common Name**	**Minimum Purity/Germination[1]**	**Pounds of Bulk Seed per Acre[2]**
Species Additions for South, Southwest, and Southeast Facing Slopes			
Encelia californica	Bush sunflower	40/60	1.0
Opuntia littoralis[6]	Coast prickly pear	N/A	Pads 4′ o.c.
		Total Pounds Bulk Seed per Acre	**1.0**

[1] Minimum germination may be adjusted after germination tests on special local collection.
[2] Bulk seed rate may be adjusted depending upon results of tests for germination.
[3] Erosion control and nurse crop species
[4] Seed stock verified as collected in Orange or Los Angeles Counties.
[5] Seed of *Stipa* spp. shall be de-awned.
[6] Plant cactus in groups of 30 (2 groups per acre)
N/A = Information about seed purity and germination not available
o.c. = On center

FINAL - Execution Plan for TRTP
Off-Site Mitigation Puente Hills Preserve
Sagebrush Scrub Habitat Restoration

The following tables are from the Habitat Mitigation and Monitoring Plan Segments 7 and 8 Mitigation Measure B-1a Version 4.0 prepared by ICF International for Southern California Edison. The tables show the success criteria for the restoration areas and potential adaptive management measures for implementation to achieve the success standards for the project.

Table 8-4. Absolute Cover Criteria for Vegetation Community Groups

	Target Percent Absolute Cover Monitoring Year				
Vegetation Community Group*	1	2	3	4	5
Woodland Vegetation	10	15	20	30	50
California Walnut Woodland					
Coast Live oak Woodland					
Nonnative Woodland					
Sycamore Woodland					
Shrub-dominated Vegetation	10	20	35	50	60
Mixed Chaparral					
Riversidian Alluvial Fan Sage Scrub					
Coastal Sage Scrub					
Mule Fat Scrub					
Riparian Vegetation	10	20	40	60	80
Freshwater Marsh					
Ruderal Wetland					
Southern Coast Live Oak Riparian Forest					
Southern Cottonwood Willow Riparian					
Herbaceous Vegetation	10	15	20	30	35
California Annual Grassland					

* Vegetation Community Grouping as presented in the FEIR and FEIS Mitigation Ratio Table

[i] Anthropogenic vegetation will be reseeded with a native seed mix for stabilization purposes.

[ii] Each restoration site is expected to attain the cover requirements for the respective vegetation community group. The success measurements for each independent community will not be averaged for comparison to the success standards.

[iii] Target percent cover criterion at individual sites may be modified based on site-specific conditions that limit the ability of a site to attain the target percent cover specified above. Examples of potential need for modification include a high presence of weeds, or low vegetative cover at the site prior to disturbance, or a high presence of weeds immediately adjacent to the site. Such modification for adjustment will be submitted to the CPUC for approval prior to application.

Table 8-5. Success Standards and Adaptive Management Measures for Mitigation Sites

Milestone	Success Standards	Adaptive Management Measure(s)
120-day plant establishment period	Seeded areas will have sufficient coverage and uniform application. 10% native cover for seeded areas measuring 100 square feet and larger. Container plantings will have 100% survival. Nonnative annual cover cannot exceed 20%. Nonnative perennial species cover cannot exceed 5%.[a]	If success standards are not met, remedial measures may include: • Remedial seeding, • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to site as necessary.
Year 1 through Year 4	Areas will have a minimum native cover as stipulated in Table 8-4. Container plantings will have 80% survival during years 1 and 2. Nonnative annual cover cannot exceed 10%. Nonnative perennial species cover cannot exceed 1%.	If success standards are not met, remedial measures may include: • Remedial seeding, • Adjustments to supplemental watering (through year 3 only), • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to the site as necessary. Beginning in year 3, if the sites are not meeting the vegetation native cover criterion, ocular estimates (as described above under "Biological Monitoring") will be performed of the adjacent similar areas and compared to biological monitoring results from the site.
Year 5	Areas will have a minimum native cover as stipulated in Table 8-4. Nonnative annual cover will be less than 10%. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

a. Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

b. Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Table 8-7. Success Standards and Adaptive Management Measures for Regulated Native Tree Mitigation

Milestone	Success Standards	Adaptive Management Measure(s)[a]
120-day plant establishment period	Tree species will have 100% survival in Good or Fair condition. Nonnative annual cover cannot exceed 20% within 2 meters of plant trunk. Nonnative perennial species cover cannot exceed 5% within 3 meters of plant trunk.2	If success standards are not met, remedial measures may include: • Plant additional container stock. • Increase supplemental watering. • Increase protection measures against herbivory. • Increase weed abatement activities as necessary. • Other adjustments to site as necessary.
Year 1 through Year 4	Tree species will have 85% survival in Good or Fair condition. Nonnative annual cover cannot exceed 10% within 2 meters of plant trunk. Nonnative perennial species cover cannot exceed 1% within 3 meters of plant trunk.b	If success standards are not met, remedial measures may include: ● Plant additional container stock. ● Increase supplemental watering (through year 3 only). ● Increase protection measures against herbivory. ● Increase weed abatement activities as necessary. ● Other adjustments to site as necessary. Beginning in year 3, if the sites are not meeting the vegetation cover criterion, a qualitative assessment will be performed of the adjacent similar areas; the site is considered to have met the success criteria if the qualitative cover of the adjacent similar vegetation is equal to the qualitative cover on the site.
Year 5	Tree species will have 85% survival in Good or Fair condition. Nonnative annual cover will be less than 10% within 2 meters of plant trunk. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

a. Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

b. Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow starthistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Table 8-8. Success Standards and Adaptive Management Measures for Mitigation Sites

Milestone	Success Standards	Adaptive Management Measure(s)
120-day plant establishment period	Seeded areas will have sufficient coverage and uniform application. 10% native cover for seeded areas measuring 100 square feet and larger. Container plantings will have 100% survival. Nonnative annual cover cannot exceed 20%. Nonnative perennial species cover cannot exceed 5%.[b]	If success standards are not met, remedial measures may include: • Remedial seeding, • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to site as necessary.
Year 1 through Year 4	Minimum native cover as stipulated in Table 8-4. Container plantings will have 80% survival (for the first two years). Nonnative annual cover cannot exceed 10%. Nonnative perennial species cover cannot exceed 1%.	If success standards are not met, remedial measures may include: • Remedial seeding, • Adjustments to supplemental watering (through year 3 only), • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to the site as necessary. Beginning in year 3, if the sites are not meeting the native vegetation cover criterion, ocular estimates (as described above under "Biological Monitoring") will be performed of the adjacent similar areas and compared to biological monitoring results from the site.
Year 5	Minimum native cover as stipulated in Table 8-4. Nonnative annual cover will be less than 10%. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

a. Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

b. Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

* Refer to Table 8-4 for vegetation cover criteria for respective vegetation community cover groups.

Table 8-9. Success Criteria for Nonnative Cover

	Target Nonnative Percent Cover Monitoring Year				
Nonnative Cover Type*	1	2	3	4	5
Nonnative annual cover	20	10	10	10	10
Nonnative perennial cover[a]	5	1	1	1	0

[a] Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Note: Each independent nonnative cover type is expected to not exceed target percentage requirements for the respective cover type (annual/perennial). The success data measurements for each independent nonnative cover type will not be averaged for comparison to the success standards.

FINAL - Execution Plan for TRTP
Off-Site Mitigation Puente Hills Preserve
Oak Woodland Habitat Restoration

Project Details	
Site Visit Date:	July 6, 10, 13, and 16, August 8, 2015
Segment Number:	8 - Off-site Mitigation Puente Hills Preserve Powder Canyon
Restoration Area:	PH8, PH9, PH10
Restoration Site Number:	PH8-1 OW, PH9-1 OW, PH10-1 OW, PH10-2 OW, PH10-3 OW
Restoration Activity Level:	4 – Weed control, hydroseeding/container planting throughout, supplemental irrigation throughout
Restoration Habitat Type:	Oak Woodland

A. General Site Description	
A1: Location:	La Habra Heights, California Puente Hills Preserve - See Figure 1 for overview of all Mitigation Areas. See Figure 9 for PH8, Figure 10 for PH9, Figure 11 for PH10
A2: Access:	Gate at Powder Canyon Trailhead Parking Lot off of Fullerton Road
A3: Area:	3.5 acres
A4: Existing Infrastructure:	Maintained fire roads
A5: Jurisdictional Features:	No
A6: Environmental Sensitive Area:	California gnatcatcher critical habitat areas adjacent to restoration sites. • Environmental Awareness training for sensitive bird species will be conducted for restoration contractor personnel prior to initiation of work. • Initial site clearing and plant material installation will be done

A. General Site Description	
	outside of the breeding season. Majority of maintenance activities, weeding and irrigation will be done outside of the breeding season. • A 200-foot buffer will be established around identified California gnatcatcher nests and territories. Work will be avoided in buffer areas until young have fledged the nest. A 200 foot buffer is an acceptable buffer per the Technical Guidance from the United States Fish and Wildlife Service for restoration activities within the Puente Hills Preserve. • Impacts to existing native vegetation during restoration work will be avoided.
A7: Protective Measures for Nesting Avian Species:	• Environmental Awareness training will be conducted for restoration contractor personnel prior to initiation of work. • Initial site clearing and plant material installation will be done outside of the breeding season. Majority of maintenance activities, weeding and irrigation will be done outside of the breeding season. • 50-foot buffer for any nesting activity • 300-foot buffer for nesting raptors; or as determined appropriate by the Project Biologist • An appropriate and protective buffer will be established for Migratory Bird Treaty Act protected non-game species.
A8: Special-Status Plant Mitigation:	No
A9: Tree Mitigation: [1],[2]	Yes; blue elderberry, California black walnut, coast live oak, holly-leaved cherry, and toyon

[1] SCE requested canyon live oak (*Quercus chrysolepis*) tree mitigation to be implemented at the Puente Hills Preserve. However, canyon live oak is not present within the Preserve and coast live oak (*Quercus agrifolia*) will be mitigated for in place of canyon live oak pending regulatory approval.
[2] Tree Mitigation is non-jurisdictional and is subject to the success criteria in Table 8-7 of the HMMP.

B. Physical Characteristics of Restoration Area	
B1: Topography:	1° to 34° slopes
B2: Aspect:	All aspects, majority of restoration area north to east aspect
B3: Elevation:	770 to 990 feet
B4: Soils:	Clay loam
B5: Surface Rock and Rockiness:	Surface gravels present and no rock outcrops
B6: Existing Erosion and Sediment Control BMPs:	None
B7: Weed Percent Cover:	80 – 100%
B8: Dominant Weed Species:	Non-native annual grasses, black mustard (*Brassica nigra*)

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
C1: Staging and Access:	All site work, staging, parking and access shall be restricted to the areas shown on Figure 1	
C2: Adaptive Management:	Adaptive Management Measures will be implemented per the HMMP as described in Chapter 8. Adaptive Management Measures to be implemented are provided in the following sections in the event drought conditions persist and if water supply is restricted by local or state regulations.	Adaptive Management includes the following remedial measures; weed eradication, replacement of container plantings, increased watering, herbivory protection, access restriction measures, and/or reseeding in areas to meet performance standards. Table 8-5, 8-7, and 8-8 shows success criteria and remedial actions to facilitate achieving success standards.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		Such actions will be taken promptly upon identification of problems and will be implemented as necessary. The Restoration Ecologist (RE) shall approve all remedial measures prior to implementation. If monitoring indicates the mitigation will not meet the success standards at the end of the five year monitoring period, SCE with assistance from the RE will perform analysis to determine which factors are contributing to the condition of the site and propose remedial actions to achieve success standards. If necessary, the RE will develop a remediation plan with approval of SCE immediately following indication the site will not meet success criteria (Table 8-4, 8-5, 8-7, 8-8, and 8-9).
C3: Site Preparation		
Recontouring:	None	
Decompaction:	None	
Site Preparation Weed Control:	12 months of site preparation weed control between January and December and continuing if necessary until plant material installation with an irrigated grow-and-kill program. A minimum of three irrigated grow-and-kill events to ensure weed control of early, mid, and late season weed species. Timing shall be scheduled to target optimal weed control and weed	The RE shall review weed control methods prior to implementation. The Restoration Contractor (RC) The RC shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: initial site clearing timing

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	removal shall be completed prior to seed set. Weed control methods shall include herbicide application and/or mechanical mowing/cutting. If drought conditions persist and water supply is restricted by local or state regulations grow-and-kill cycles will rely on natural rainfall to promote germination of weed species. Per the HMMP, success of the grow-and-kill cycles will be evaluated by the Restoration Contractor and Restoration Ecologist to determine the need for additional cycles. The grow-and-kill period may be extended until effective weed control is accomplished since natural rainfall driven grow-and-kill programs may require more cycles to equal the control of an irrigated grow-and-kill program. If annual rainfall is significantly below average, then additional grow-and-kill cycles extending into the next season may be necessary. Prior to installation the restoration area will be cleared of all weed thatch to facilitate seed/soil contact. Weed control shall occur in a 50-foot weed buffer adjacent to portions of Restoration Area PH8, PH9, and PH10. Weed control methods will consist of mowing of non-native annual grasses and black mustard and selective use of herbicide for the invasive species fennel (*Foeniculum vulgare*).	and method; Grow-and-kill irrigation timing and duration; Grow-and-kill weed control timing, methods, and weeds controlled. Restoration sites shall be maintained free of trash, microtrash, and debris. The RC will make all reasonable efforts to remove trash and debris from every restoration site prior to installation and throughout the five-year maintenance period. Material will be properly disposed of off-site. Weeded material will be collected and properly disposed of off-site. The weed buffer areas for PH8-1, PH9-1 and PH10-1, PH10-2 and PH10-3 total 1.16 acres.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
C4: Planting and Seeding		
Target Vegetation Community:	Oak Woodland	
Sources of Plant Material:	To the extent possible, all plant material shall be obtained from native plant communities growing within the Puente Hills Preserve. For those species that function as erosion control or do not exist in large enough quantities within the Preserve, it will be necessary to either a) use seed stock from a seed collector/supplier that can be verified as collected within Los Angeles or Orange counties or b) extend the collection area on a species-by-species basis. Seed collection shall be as close as possible to the Preserve to maintain genetic integrity in nearby open space areas such as Chino Hills State Park and Peter F. Schabarum Regional Park or other appropriate inland areas in Los Angeles and Orange Counties.	The RC shall be responsible for obtaining seed from seed supplier. Seed tags indicating the Pure Live Seed (PLS) and Bulk rate must be attached to each bag of seed and provided to the RE.
Methods of Propagation:	Container plants shall be contract grown by a nursery that has experience in growing native plants using propagules collected from approved sites as specified in the HMMP.	The RC shall contract with a plant nursery specializing in native plant propagation. Container plants will be contract grown by a nursery with at least three years of experience growing native plants from the target vegetation communities of the project area. The order shall be placed so that the plants have a well-developed root system and are conditioned

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		prior to planting in Fall/Winter. Arbuscular mycorrhizal inoculum will be purchased and incorporated with the greenhouse mix according to the label at the time of transplantation to containers. The RC and RE will inspect all container plants during the growing stage and upon delivery for planting to verify the plants are the correct species and quantities, are free of weeds, pests, and disease, and showing signs of healthy growth. Plants shall be grown in the specified container long enough to develop a root system that reaches the bottom of the container and forms a healthy root ball without becoming root bound. Any container plants that are not within these standards will be rejected.
Soil Amendments:	Endomycorrhizal inoculum shall be added to the hydroseed mix as specified in the HMMP. A fertilizer packet (10 grams weight) shall be added at the bottom of each planting hole prior to planting container plants. Each packet shall contain nitrogen, available phosphoric acid and soluble potash plus minor nutrients. The nitrogen, phosphorus, and potassium shall be coated with a polyurethane coating to provide 15.69 percent coated slow-release nitrogen, 5.09 percent coated slow-release available phosphate, and 6.8 percent slowly available soluble potash. Bio	Arbuscular mycorrhizal inoculum shall be added to the hydroseed mix at a rate of 60 pounds per acre (approximately 3,600,000 live propagules per acre) based on the guarantee of the supplier. The supplier shall be a person or company with experience in Arbuscular mycorrhizal development. Commercially available *Glomus intraradices* is recommended since this is an ubiquitous species and will not impede the development of other native Arbuscular mycorrhizal species.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	Paks® meeting these specifications are available from Reforestation Technologies Inc.	
Seeding Method:	Two-step hydroseed application as specified in the HMMP in the Fall/Winter prior to container plant installation. The oak woodland seed mix is provided in Table 1.	The RC shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: Hydroseeding date(s). Prior to seeding, the restoration area will be cleared of all weed thatch to facilitate seed/soil contact. All hydroseed mixing shall be performed in a clean tank. The hydroseeder must be equipped with a continuous agitation and recirculation system to produce a uniform slurry and have the capacity to apply this slurry in a sweeping motion at a continuous rate. The RC shall spray designated areas with the slurry in a sweeping motion and in an arched stream until a uniform coat is achieved. The seed mix will be applied using a two-step hydroseed application. ***First Application*** The hydroseed mixture must be applied within one hour of preparation. • 500 pounds (lbs)/acre of virgin cellulose

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		wood fiber • 60 lbs/acre of Arbuscular mycorrhizal inoculum • Specified seed mix ***Second Application*** The second application shall occur within two hours following completion of the first application. • 1,500 lbs/acre of virgin cellulose wood fiber • 160 lbs/acre of organic M-binder (Ecology Control or comparable product)
Container Planting:	Container plant installation shall be in the Fall/Winter, as specified in the HMMP following hydroseed application, planted in groups at the specified spacing and aspect shown in Table 2.	The RC shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: quantity of container plants per species installed in each restoration area. The RE will inspect and approve all container plants prior to planting to verify the plants are the correct species and quantities, are free of weeds, pests, and disease, and showing signs of healthy growth. Any container plants that are not within these standards will be rejected. Plant layout will be determined based on micro

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		topographic features and planting sites will be marked on site using colored pin flags by the RC under the supervision of the RE. Upon plant delivery, container plants shall be stored in a designated temporary storage location. The RC is responsible for protection from herbivory, vandalism or theft, as well as maintenance (watering) of the plants while they are in temporary storage. All container plants shall be planted in accordance with the following specifications • Plants shall be planted with the roots untangled. Roots shall be protected from weather exposure during planting. • Planting holes shall be augured and be no more than 1.5 times the diameter and 2 times the depth of the container species to be planted. • Planting holes shall be backfilled 25 percent with excavated native soil and filled with water and allowed to drain completely prior to planting. Container plants must never be installed in planting holes with standing water; all water shall be allowed to settle and infiltrate through the soil prior to plant installation.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		• The specified fertilizer packet shall be added to each planting hole just prior to planting. • Plantings shall be set in well-drained planting holes with the crown of the root ball no more than 0.5 inches above grade. Under no circumstances should the plant crown be buried. The soil around the planting shall be tamped down sufficiently to eliminate any air pockets in the soil. • A basin around the planting shall be constructed by creating a berm above the existing grade approximately 24 inches in diameter around the planting. • Each planting shall be sufficiently watered after installation so that water reaches the lower roots. ***Acorn Plantings*** The RE will inspect and approve the quality of the acorns prior to planting to ensure that they are healthy, free of pests and disease, and are the proper size without observable damage. Acorn planting holes shall be approximately 24 inches deep and approximately 18 to 20 inches in diameter, breaking the soil where required into fine particles to prepare a seed bed.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		Protective open bottom root guards shall be installed as specified in the Pest Control Section. The planting holes shall be backfilled. A total of four acorns will be planted within each hole approximately 6 inches apart at a depth of approximately 1 to 2 inches. The remaining soil will be backfilled into the planting holes. A basin around the planting shall be constructed by creating a berm above the existing grade approximately 24 inches in diameter around the plant.
C5: Irrigation		
Water Source:	1) La Habra Heights Water District – water tank 2) La Habra Heights Water District – backflow device	
Irrigation System:	A temporary overhead irrigation system shall be installed with the following design: • A mainline with lateral lines will be installed with gate valves to separately manage the areas, as necessary depending on site soils and landforms. • Lateral lines shall be laid out along the contour of slopes so that the top of the slope can be managed separately from the lower slope. • Sprinkler heads shall be sized to accommodate the infiltration rate of the soil and landscape position. The size of the sprinkler heads and application rate will be determined after infiltration is evaluated in	The following temporary irrigation system shall be installed for 1-gallon oak and walnut container plants (for all irrigation designs): • PVC lateral lines will be laid out from the mainline to individual container plants • Full circle bubbler nozzles shall be installed at each planting location • Individual bubbler nozzles shall be pressure regulating • The bubbler irrigation system shall be installed to operate independently from

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	each area. • The system shall be laid out so that the wetted area from each sprinkler head has no more than a two- to three-foot overlap with adjacent sprinklers. The final layout design will depend on the system water pressure and the size of the sprinkler heads (based on the infiltration rate of the soil). • All sprinkler stems shall be fitted with on/off ball valves to allow for hose connections and hand watering of container plants at installation and during establishment, as necessary. These valves will also allow particular areas to be shut-off, as necessary. • Operation of the system will require management by a person with demonstrated previous experience irrigating native vegetation. Under no circumstances will the irrigation system be operated with any type of automatic timer. The system will be run manually and only when at least one restoration contractor crew person is on site. If drought conditions persist and water supply is restricted by local or state regulations, the irrigation system will consist of micro sprayers to supply irrigation for container plants only.	the overhead irrigation system The RE shall approve the irrigation design, layout, and schedules prior to installation of the system and implementation of watering events. Portable booster pumps may be necessary to pump water to upper portions of the restoration areas. Each pump shall have containment surrounding them and only operated when a member of the RC crew is on-site. **Alternate Temporary Irrigation System** If drought conditions persist and water supply is restricted by local or state regulations, the irrigation system will supply irrigation for the container plants only and shall be installed with the following design: ***Container Plant Groups*** • A mainline with lateral lines will be installed with gate-valves to separately manage the areas, as necessary depending on site soils and landforms. • PVC lateral lines shall be laid out from the mainline to each container plant group • Low precipitation rate rotary nozzles on

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		risers shall be installed within each container plant group. Nozzles will be installed to water only the container planting group. The application rate will be determined after infiltration is evaluated for each area. • The system shall be laid out so that the wetted area from each low precipitation rate rotary nozzle head has slight overlap with adjacent nozzles. The final layout design will depend on the system water pressure (based on the infiltration rate of the soil). • All sprinkler stems shall be fitted with on/off valves to allow for hose connections and hand watering of container plants at installation and during establishment, as necessary. These valves will also allow particular areas to be shut-off, as necessary. • Operation of the system will require management by a person with demonstrated previous experience irrigating native vegetation. ***Tree Mitigation Species (1-gallon Oak and Walnut container plants)*** • PVC lateral lines will be laid out from

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		the mainline to individual container plants • Full circle bubbler nozzles shall be installed at each planting location • Individual bubbler nozzles shall be pressure regulating • The bubbler irrigation system shall be installed to operate independently from the low precipitation rate irrigation system If alternate irrigation system required, then, toyon and lemonade berry plant spacing stays the same (Table 2), with hollyleaf redberry and elderberry plant spacing approximately 10 to 12 feet planted in groups around the toyon and lemonade berry, along with heart-leaved penstemon and fuschia flowered currant. Under no circumstances will the irrigation system be operated with any type of automatic timer. The system will be run manually and only when at least one restoration contractor crew person is on site.
Irrigation Timing:	The temporary irrigation system shall provide supplemental irrigation during the first three years of establishment as necessary for plant establishment.	Irrigation shall be implemented as needed to supplement or mimic natural rainfall patterns in such a way that the plants develop deep root

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	Irrigation events will depend on evapotranspiration between irrigation events and soil moisture. Irrigation will consist of wetting the soil to full field capacity (18 inches after planting; and 18-24 inches during plant establishment). After adequate germination of the seed mix, the soil shall be allowed to dry down to approximately 50 to 60 percent of field capacity in the upper 6 to 12 inches of soil before the next irrigation event.	systems to maximize survival and vigor after irrigation is removed. The RC shall be responsible for inspection and timely repair of any irrigation deficiency. The RC shall consult with RE to determine if extending or revising the watering schedule is necessary. Watering of restoration sites will be gradually reduced as the plantings become established and mature, and will be discontinued at least two years prior to final acceptance and approval of the restoration site.
C6: Erosion and Sediment Control		
Erosion and Sediment Control BMPs:	No grading or ground disturbance will be performed; weeded areas will be hydroseeded and planted prior to the onset of the rainy season per BMP.	Erosion control measures will only be installed as needed with the approval of the RE.
C7: Maintenance Recommendations		
Weed Control Timing:	Weeds shall be controlled, as necessary, before they set seed and/or before they reach 12 inches in height. The majority of the weed control effort will be required during winter through early summer. The number of maintenance visits shall be determined by need. Approximately four maintenance events shall be estimated for a normal rainfall season with greater or fewer weed events as dictated by fluctuations in rainfall timing and amount.	Nonnative plants will be suppressed for the duration of the maintenance and monitoring period throughout the restoration sites to achieve the nonnative cover Success Criteria presented in Table 8-9. Weed control activities shall include weed control throughout the restoration sites and within the planting basins. All planting basins, or an area 3 feet in diameter around each plant, will be maintained free of weeds during the duration of the maintenance

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	Weed control in the weed control buffer areas will be implemented as necessary with at minimum one control event in spring and one in fall. Weeding shall be timed to control weed species prior to seed-set.	period.
Weed Control Methods:	Weed control methods will include mainly hand-pulling and limited selective spot spraying of herbicides for high priority invasive species that may re-sprout from taproots or rhizomes. Limited use of selected herbicides is specified when no other effective alternative is available to remove and control weed species and will be authorized only by the Project Restoration Ecologist. Pre-emergent chemicals shall not be used at any time in the restoration process. Weed control shall occur in a 50-foot weed buffer adjacent to portions of Restoration Area PH8, PH9, and PH10. Weed control methods will consist of mowing of non-native annual grasses and black mustard and selective use of herbicide for the invasive species fennel (*Foeniculum vulgare*).	The RE shall review weed control methods prior to implementation. Productive plant materials containing viable seed shall be bagged, removed from the site, and disposed of at an approved location. Weeded material will be collected and properly disposed of off-site. Installed plant material and native plant volunteers shall not be damaged by weed control operations. ***Hand-pulling*** Shall be performed by hand-pulling or using hand tools. Weed removal shall not cause disruption to the root system or the above-ground structure of native plants. ***Herbicide application*** Herbicide control and herbicide product shall be approved by the RE prior to use. All herbicides shall be applied in accordance with all state and federal regulations and manufacturer's instructions by a Licensed Qualified Applicator under the direction of a Pest Control Advisor

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		(PCA). Herbicides shall not be applied during or within 72 hours of a rain event, or when wind velocities exceed five miles per hour. Care will be taken to avoid spraying native species. Herbicide will be applied in a manner that minimizes drip and drift into adjacent areas. At no time shall herbicides be used to control weeds within planting basins.
Pest Control:	Root guards shall be used for oak plantings using 18-gauge gopher wire with 1/2-inch mesh to protect against gopher herbivory. The root guard shall have an open bottom to so as not to inhibit plant roots. The root guard shall be buried a minimum of 24 inches below ground and extend above ground two to four inches. If browsing is observed, corrective measures such as organic, nontoxic deterrents and/or plant cages may be used and will be authorized only by the Project Restoration Ecologist.	Pest control products and methods shall be approved by the RE prior to implementation. Root guards shall be used for walnut plantings as described for oak plantings. The RE will monitor the site for damaging plant insects and diseases. The use of pesticides will be avoided unless recommended by the RE for special problems. Any pesticide use will be proposed to SCE and the resource agencies for approval. Pesticide applications will be applied only by those with a valid Qualified Applicators License issued by the California Department of Pesticide Regulation. Pesticide will be applied according to the product label.
Protective Fencing:	Protective fencing shall be placed along public trails consisting of metal T-bar posts at 30-foot intervals with bright yellow rope attached at a height of approximately four feet. All-weather and graffiti	

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	protected signs shall be placed at a few key locations along the fencing with information explaining the sensitivity of the restoration area. The fence will serve as an effective barrier/deterrent to humans without inhibiting wildlife.	
Plant Replacement:	Re-seeding and container plant replacement shall occur per the HMMP if success standards are not met. Per the HMMP Chapter 8 Success Standards for Native Trees page 8-32 and 8-33, tree mitigation species will be over planted during implementation to allow for plant loss during establishment. Overplanting during initial installation will maximize establishment time for tree mitigation species and reduce or eliminate the need for plant replacement later in the restoration process. The following target densities and target numbers were determined for tree mitigation species and plant replacement will occur if survivorship falls below the target density or number. As such, the regulated tree mitigation survival criterion will apply to the target density or target number for tree mitigation species. *Coast Live Oak* The target density for coast live oak is 70 per acre. The oak woodland restoration areas will be overplanted by approximately three and a half times the target density. The target density, 245 total coast live oak	The RC is responsible for supplemental planting and seeding to achieve specified success requirements, except in those instances where the failure of the restoration areas to meet the survival and cover requirements is due to something beyond the control of the RC (catastrophic events such as flood, fire, etc.) In these circumstances, it would be the financial responsibility of Southern California Edison (SCE), the mitigation sponsor, to provide the supplemental materials. As specified in Mitigation Measure B-1a, if a fire occurs in a revegetation area during the monitoring period, SCE shall be responsible for a one-time replacement. Re-seeding may be prescribed as a remedial measure if the target percent absolute native cover is not met during the 120-day plant establishment period and maintenance/monitoring years 1 through 5. Re-seeding may be prescribed in areas 100 square feet or greater not meeting the minimum cover

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	over 3.5 acres, will successfully achieve the tree mitigation requirement of 32 coast live oak trees. *Blue Elderberry* The target number for blue elderberry across all restoration areas is 322, the required tree mitigation number plus a 20 percent contingency. The target number of blue elderberry in the oak woodland restoration areas is 16. The target number is derived by multiplying the percentage of blue elderberry to be planted in the oak woodland restoration areas (5%) by the target number (322). *Toyon* The target number for toyon across all restoration areas is 60, the required tree mitigation plus a 20 percent contingency. The target number of toyon in the oak woodland restoration areas is 17, derived by multiplying the percentage of toyon to be planted in the oak woodland restoration areas (28%) by the target number (60). *Holly-leaved Cherry* The holly-leaved cherry tree mitigation requirement is 2. Holly-leaved cherry will be overplanted by approximately 7 times the tree mitigation requirement in restoration area PH10. The target number of holly-leaved cherry is 5.	requirement observed during monitoring visits. Reseeded areas must achieve an equivalent native species cover as the surrounding restored habitat by the end of the five-year maintenance/monitoring period based on performance monitoring described in Section D Restoration Site Maintenance and Biological Monitoring. See Table 8-4 for Absolute Cover Criteria for Vegetation Community Groups and Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures. Re-seeding shall be implemented by broadcast seeding. Seed may be broadcast onto the site by hand or using a hand-crank spreader. Seed will be premixed with dispersal agent (such as wheat bran) at approximately 25 percent of the overall volume. Prior to seeding the site may be watered to saturate the surface soil to aid in seed adhesion to the soil surface. Seed shall be mixed with a carrier as stated above, and divided into two equal parts. Half of the seed shall be hand-broadcast by walking across the entire area in a linear orientation appropriate for the site. The remaining half of the seed shall be hand-broadcast by walking across the site perpendicular to the first application. Seed areas shall be lightly raked to incorporate seeds

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	If water supply is restricted by local or state regulations and the sagebrush scrub and purple sagebrush scrub restoration areas are seeded only, the following target numbers for blue elderberry and toyon were determined and plant replacement will occur if survivorship falls below the target number. *Blue elderberry* Thirty additional blue elderberry container plants will be installed within the oak woodland restoration areas to meet the tree mitigation requirements. Plant replacement for all failed blue elderberry plants will occur if no elderberry plants successfully establish from seed in the purple sage scrub and sagebrush scrub restoration areas. *Toyon* The target number of toyon plants will be 30 plants to meet the tree mitigation requirements. Plant replacement will occur if survivorship falls below 30 if no toyon successfully establish from seed in the purple sage scrub and sagebrush scrub restoration areas.	into the soil. All replacement planting shall be in-kind unless otherwise specified by the RE. If adjustments to species for replacement planting are determined necessary by the RE, the replacement species must be on the approved plantings list for the associated habitat, and replacements be approved by SCE, and documented in the maintenance inspection logs. Container plant replacement will occur for non-tree mitigation species during the following phases: **120-day plant establishment period** Container plants (non-tree mitigation species) will have 100% survival following the 120-day plant establishment period. All failed container plants will be replaced during this phase of restoration. **Maintenance/Monitoring Years 1 and 2** Container plants (non-tree mitigation species) will have 80% survivorship in years 1 and 2. Failed container plants will be replaced as necessary to achieve 80% survivorship.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
D1: Maintenance		
Responsible Party	Restoration Contractor	
120-day Plant Establishment Period	Weekly visits to maintain installed plant material. Weed control and irrigation as needed.	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration area: irrigation timing/duration; weed event timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species. See Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial measures if success standards are not met. Restoration sites shall be maintained free of trash, microtrash, and debris. The RC will make all reasonable efforts to remove trash and debris from every restoration site prior to installation and throughout the five-year maintenance period. Material will be properly disposed of off-site.
Year 1 through 3	Timing for weed control will depend on annual weather patterns and may vary by year during the maintenance period with the most intense weeding maintenance in the first and second year.	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration area: irrigation timing/duration; weed event

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	Approximately four maintenance events shall be estimated for a normal rainfall season with greater or fewer weed events as dictated by fluctuations in rainfall timing and amount. Weed control in the weed control buffer areas will be implemented as necessary with at minimum one control event in spring and one in fall. Weeding shall be timed to control weed species prior to seed-set. Irrigation will be timed as needed during the first three years of establishment and will depend on evapotranspiration between irrigation events and soil moisture.	timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species. See Table 8-5, 8-7, 8-8 for Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial measures if success standards are not met.
Year 4 and 5	Seasonal limited spot weeding of select invasive species will be implemented as necessary in years four and five to control weed species while minimizing disturbance to the restoration area. Weed control in the weed control buffer areas will be implemented as necessary with at minimum one control event in spring and one in fall. Weeding shall be timed to control weed species prior to seed-set.	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration area: irrigation timing/duration; weed event timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species. See Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial measures if success standards are not met.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		The RC will be responsible for removing the irrigation system following final acceptance and approval of the restoration sites.
D2: Maintenance Monitoring		
Responsible Party	Restoration Ecologist	
120-day Plant Establishment Period	Weekly visits in the first month following installation and every two weeks in months two and three	
Quarterly Monitoring	Four visits per year in maintenance and monitoring Year 1 through Year 5 (following the 120-day plant establishment period). Timing will vary depending on annual weather patterns.	
D3: Biological Monitoring		
Responsible Party	Restoration Ecologist	
Annual Monitoring	Performance monitoring will be conducted annually in maintenance and monitoring Years 1 through 5. Timing will vary depending on annual weather patterns. <u>Monitoring Methods</u> In lieu of the Monitoring Methods per the HMMP, point-intercept transects have been selected as the most appropriate monitoring method to meet the habitat restoration objectives of the Offsite Mitigation at the Puente Hills Preserve. This method is well suited	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	to measure semiarid woodlands and will provide an efficient and reliable method for estimating cover and species composition of the restoration areas. As documented in a study by Deutschman and Strahm[3] (2008) that compared visual cover estimation, point-intercept transects, and quadrat sampling in coastal sage scrub, chaparral and grassland habitat, the point-intercept transect method was the most accurate and precise method for monitoring species cover. The point-intercept method also efficiently captures the composition and structure of the herbaceous understory in woodlands. Since herbaceous species are typically beneath the tree and shrub canopy layer, cover tends to be underestimated in large sample plots when estimating cover visually. Point-intercept is considered to be the most objective and least biased method for measuring cover compared to visual estimation and line-intercept transects since cover is based simply on whether vegetation touches the sampling bar at a sample point or not (Bonham[4] 1989). The point-intercept method will also more reliably detect interannual changes in	

[3] Deutschman, D. and S. Strahm. 2008. Improving Statistical Sampling and Vegetation Monitoring for Open Space in Central Orange County. Report prepared for the Nature Reserve of Orange County. February 2008. 57 pp.
[4] Bonham, C.D. 1989. Measurements for Terrestrial Vegetation. New York, NY: John Wiley and Sons.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	cover compared to visual estimation. As documented by Greig-Smith[5] (1983) cover estimates deviated by the group mean by as much as 25% between observers meaning large changes in cover would have to occur before it can attributed to factors other than observer bias. <u>Sample Design and Methods</u> Sampling within the oak woodland habitat will be stratified by the restoration areas, with, at minimum one point-intercept transect per restoration area. Approximately one transect will be placed for every 2-3 acres, depending on the diversity of site characteristics of restoration areas, including soil type, slope aspect and landscape features that may influence hydrology or infiltration of water. A total of four transects will be read in the oak woodland habitat. Locations of transects will be determined randomly using a numbered grid system. A 50-meter tape will be stretched taut at the randomly selected locations. Fifty points will be sampled at each transect along the tape at 1-meter intervals starting at 1 meter and ending at 50 meters. A one-meter long, ¼ inch diameter round steel bar will be placed	

[5] Greig-Smith, P. (1983). Quantitative Plant Ecology. 3rd edition. Berkeley: University of California Press.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	perpendicular to the transect line at each sampling point, consistently on the same side of the tape. All live species that contact the bar, or in the case of overhanging vegetation, intercept the upward projection of the bar, will be counted and recorded. If no vascular plants are intercepted at the sample point, it will be recorded as bare ground or plant litter. Seedlings and juveniles of trees, shrubs, and sub-shrubs will be recorded. Seedlings will be defined as species germinated during the sampling year with a non-woody base and juveniles as individuals germinated within the sampling year with development of woody material at the base. <u>Monitoring Variables</u> Variables for quantitative performance monitoring were selected based on the phenological and establishment-related characteristics of the restoration habitat and the success standards outlined in the HMMP. Variables selected include the absolute cover of native species, exotic species, bare ground and plant litter; species diversity; and survivorship counts of container stock. Cover data will be reported as absolute percent cover determined by dividing the total number of hits for each plant species or ground cover by the total number of points on the transect. Therefore, the total percent	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	reported for absolute cover may be greater than 100 percent because of overlap of plants at each sampling point. Sampling for diversity will consist of listing all the species present along the 50-meter point-intercept transect line and within a 1-meter belt on either side of the transect line. Listing plant species within the 2-meter belt will allow for detection of species that may be missed along the point-intercept transect line. Species diversity will be reported as species richness, the number of species encountered in the line and belt transects. Survivorship of container planted stock will be determined by counting the total number of dead container plants across all restoration areas. Survivorship counts of container stock will be conducted for non-tree mitigation species in the first two years of performance monitoring only. Monitoring and success criteria per the HMMP for tree mitigation species will include survivorship counts along with an assessment on plant health and vigor as described in the HMMP and will be conducted for tree mitigation species in performance monitoring years one through five. <u>Photo Point Monitoring</u>	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	Permanent photo points will be established to conduct photographic documentation of restoration progress and the development of the restoration habitat. Photo points will be established prior to implementation to provide a representative overview before restoration for comparison to "after photos," taken annually during performance monitoring. The geographic coordinates will be recorded using a sub-meter precision global positioning system (GPS) along with the general compass direction for each photo point location. One permanent photo point will be established for each restoration area.	

E. Success Standards		
E1: Success Standards for Mitigation Sites:	Success standards per the HMMP: • Absolute Native Cover Criteria for Vegetation Community Groups Table 8-4 • Success Standards and Adaptive Management Measures for Mitigation Sites Table 8-5 • Success Criteria for Nonnative Cover Table 8-9	
E2: Success Standards for Regulated Tree Mitigation:	Success standards per the HMMP: • Success Standards for Regulated Native Tree Mitigation Table 8-7 • Success Standards and Adaptive Management	

E. Success Standards		
	Measures for Mitigation Sites Table 8-8 • Success Criteria for Nonnative Cover Table 8-9	

Table 1 Oak Woodland Seed Mix – 3.5 acres			
Scientific Name	**Common Name**	**Minimum Purity/Germination[1]**	**Pounds of Bulk Seed per Acre[2]**
Canopy and Shrub Layer			
Amorpha californica	California false indigo	95/50	0.25
Eriophyllum confertiforum	Golden yarrow	30/60	1.5
Isocoma menziesii var. vernonioides	Coastal goldenbush	40/30	1.5
Keckiella cordifolia	Heart-leaved penstemon	40/20	0.2
Malosma laurina	Laurel sumac	95/60	0.1
Ribes speciosum	Fuschia flowered currant	N/A	0.2
Toxicodendron diversilobum	Poison oak	N/A	0.2
Herbaceous Understory			
Acmispon maritumus[3]	Coastal lotus	98/75	0.5
Ambrosia confertiflora	Weak leaved burweed	N/A	0.5
Ambrosia psilostachya	Western ragweed	85/25	0.25
Bromus carinatus californica	California brome	95/80	2.0
Claytonia perfoliata	Miner's lettuce	30/40	0.25
Elymus glaucus	Blue wild rye	90/80	0.5
Festuca microstachys[3,4]	Small fescue	90/80	3.0
Galium angustifolium	Narrowleaf bedstraw	80/30	0.25
Lupinus bicolor[3,4]	Miniature lupine	98/80	2.0
Lupinus truncatus[3,4]	Collar lupine	98/85	1.5
Lupinus succulentus[3,4]	Arroyo lupine	98/85	1.0
Melica imperfecta	Melic grass	90/60	1.5
Plantago erecta[3,4]	California plantain	98/75	20.0
Phacelia ramosissima[3]	Branching phacelia	95/80	0.2
Stipa lepida[4,5]	Foothill needlegrass	70/60	2.5
Stipa pulchra[4,5]	Purple needlegrass	70/60	2.5
		Total Pounds Bulk Seed per Acre	**42.4**

[1] Minimum germination may be adjusted after germination tests on special local collection.
[2] Bulk seed rate may be adjusted depending upon results of tests for germination.
[3] Erosion control and nurse crop species
[4] Seed stock verified as collected in Orange or Los Angeles Counties.
[5] Seed of *Stipa* spp. shall be de-awned.
N/A = Information about seed purity and germination not available

Table 2 Oak Woodland Container Plant Palette – 3.5 acres				
Scientific Name	**Common Name**	**Container Size**	**Plant Spacing Within Groups[1] (feet)**	**Plants per Acre**
Heteromeles arbutifolia	Toyon	D-40	20′	30
Juglans californica	California black walnut	1 gallon	20′	20
Keckiella cordifolia	Heart-leaved penstemon	D-40	8′	30
Prunus ilicifolia[2]	Holly-leaved cherry	D-40	15′	15[3]
Quercus agrifolia	Coast live oak	Acorns[4]	5′	150
Quercus agrifolia	Coast live oak	1 gallon deep pot	20′	100
Rhamnus ilicifolia	Hollyleaf redberry	D-40	20′	30
Rhus integrifolia	Lemonade berry	D-40	15′	30
Ribes speciosum	Fuschia flowered currant	D-40	8′	30
Sambucus nigra ssp. caerulea[5]	Blue elderberry	D-40	15′	15
			Total Plants per Acre	**435**

[1] Spacing = Feet on-center distance from other container planted shrub/tree species
[2] ***Prunus ilicifolia*** to be planted in PH10 only
[3] A total of 15 *Prunus ilicifolia* to be planted in PH10. Amount not included in total plants per acre.
[4] Four acorns to be planted within each planting hole approximately 6 inches apart at a depth of 2 inches.
[5]An additional 30 blue elderberry will be planted if the purple sage scrub and sagebrush scrub habitats are seeded only.

FINAL - Execution Plan for TRTP
Off-Site Mitigation Puente Hills Preserve
Oak Woodland Habitat Restoration

The following tables are from the Habitat Mitigation and Monitoring Plan Segments 7 and 8 Mitigation Measure B-1a Version 4.0 prepared by ICF International for Southern California Edison. The tables show the success criteria for the restoration areas and potential adaptive management measures for implementation to achieve the success standards for the project.

Table 8-4. Absolute Cover Criteria for Vegetation Community Groups

	Target Percent Absolute Cover Monitoring Year				
Vegetation Community Group*	1	2	3	4	5
Woodland Vegetation	10	15	20	30	50
California Walnut Woodland					
Coast Live oak Woodland					
Nonnative Woodland					
Sycamore Woodland					
Shrub-dominated Vegetation	10	20	35	50	60
Mixed Chaparral					
Riversidian Alluvial Fan Sage Scrub					
Coastal Sage Scrub					
Mule Fat Scrub					
Riparian Vegetation	10	20	40	60	80
Freshwater Marsh					
Ruderal Wetland					
Southern Coast Live Oak Riparian Forest					
Southern Cottonwood Willow Riparian					
Herbaceous Vegetation	10	15	20	30	35
California Annual Grassland					

* Vegetation Community Grouping as presented in the FEIR and FEIS Mitigation Ratio Table

[i] Anthropogenic vegetation will be reseeded with a native seed mix for stabilization purposes.

[ii] Each restoration site is expected to attain the cover requirements for the respective vegetation community group. The success measurements for each independent community will not be averaged for comparison to the success standards.

[iii] Target percent cover criterion at individual sites may be modified based on site-specific conditions that limit the ability of a site to attain the target percent cover specified above. Examples of potential need for modification include a high presence of weeds, or low vegetative cover at the site prior to disturbance, or a high presence of weeds immediately adjacent to the site. Such modification for adjustment will be submitted to the CPUC for approval prior to application.

Table 8-5. Success Standards and Adaptive Management Measures for Mitigation Sites

Milestone	Success Standards	Adaptive Management Measure(s)
120-day plant establishment period	Seeded areas will have sufficient coverage and uniform application. 10% native cover for seeded areas measuring 100 square feet and larger. Container plantings will have 100% survival. Nonnative annual cover cannot exceed 20%. Nonnative perennial species cover cannot exceed 5%.[a]	If success standards are not met, remedial measures may include: • Remedial seeding, • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to site as necessary.
Year 1 through Year 4	Areas will have a minimum native cover as stipulated in Table 8-4. Container plantings will have 80% survival during years 1 and 2. Nonnative annual cover cannot exceed 10%. Nonnative perennial species cover cannot exceed 1%.	If success standards are not met, remedial measures may include: • Remedial seeding, • Adjustments to supplemental watering (through year 3 only), • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to the site as necessary. Beginning in year 3, if the sites are not meeting the vegetation native cover criterion, ocular estimates (as described above under "Biological Monitoring") will be performed of the adjacent similar areas and compared to biological monitoring results from the site.
Year 5	Areas will have a minimum native cover as stipulated in Table 8-4. Nonnative annual cover will be less than 10%. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

a. Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

b. Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Table 8-7. Success Standards and Adaptive Management Measures for Regulated Native Tree Mitigation

Milestone	Success Standards	Adaptive Management Measure(s)[a]
120-day plant establishment period	Tree species will have 100% survival in Good or Fair condition. Nonnative annual cover cannot exceed 20% within 2 meters of plant trunk. Nonnative perennial species cover cannot exceed 5% within 3 meters of plant trunk.2	If success standards are not met, remedial measures may include: • Plant additional container stock. • Increase supplemental watering. • Increase protection measures against herbivory. • Increase weed abatement activities as necessary. • Other adjustments to site as necessary.
Year 1 through Year 4	Tree species will have 85% survival in Good or Fair condition. Nonnative annual cover cannot exceed 10% within 2 meters of plant trunk. Nonnative perennial species cover cannot exceed 1% within 3 meters of plant trunk.b	If success standards are not met, remedial measures may include: ● Plant additional container stock. ● Increase supplemental watering (through year 3 only). ● Increase protection measures against herbivory. ● Increase weed abatement activities as necessary. ● Other adjustments to site as necessary. Beginning in year 3, if the sites are not meeting the vegetation cover criterion, a qualitative assessment will be performed of the adjacent similar areas; the site is considered to have met the success criteria if the qualitative cover of the adjacent similar vegetation is equal to the qualitative cover on the site.
Year 5	Tree species will have 85% survival in Good or Fair condition. Nonnative annual cover will be less than 10% within 2 meters of plant trunk. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

a. Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

b. Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow starthistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Table 8-8. Success Standards and Adaptive Management Measures for Mitigation Sites

Milestone	Success Standards	Adaptive Management Measure(s)
120-day plant establishment period	Seeded areas will have sufficient coverage and uniform application. 10% native cover for seeded areas measuring 100 square feet and larger. Container plantings will have 100% survival. Nonnative annual cover cannot exceed 20%. Nonnative perennial species cover cannot exceed 5%.[b]	If success standards are not met, remedial measures may include: • Remedial seeding, • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to site as necessary.
Year 1 through Year 4	Minimum native cover as stipulated in Table 8-4. Container plantings will have 80% survival (for the first two years). Nonnative annual cover cannot exceed 10%. Nonnative perennial species cover cannot exceed 1%.	If success standards are not met, remedial measures may include: • Remedial seeding, • Adjustments to supplemental watering (through year 3 only), • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to the site as necessary. Beginning in year 3, if the sites are not meeting the native vegetation cover criterion, ocular estimates (as described above under "Biological Monitoring") will be performed of the adjacent similar areas and compared to biological monitoring results from the site.
Year 5	Minimum native cover as stipulated in Table 8-4. Nonnative annual cover will be less than 10%. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

a. Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

b. Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

* Refer to Table 8-4 for vegetation cover criteria for respective vegetation community cover groups.

Table 8-9. Success Criteria for Nonnative Cover

	Target Nonnative Percent Cover Monitoring Year				
Nonnative Cover Type*	1	2	3	4	5
Nonnative annual cover	20	10	10	10	10
Nonnative perennial cover[a]	5	1	1	1	0

[a] Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Note: Each independent nonnative cover type is expected to not exceed target percentage requirements for the respective cover type (annual/perennial). The success data measurements for each independent nonnative cover type will not be averaged for comparison to the success standards.

FINAL - Execution Plan for TRTP
Off-Site Mitigation Puente Hills Preserve
Walnut Woodland Habitat Restoration

Project Details	
Site Visit Date:	July 6, 10, 13, and 16, 2015
Segment Number:	8 - Off-site Mitigation Puente Hills Preserve Powder Canyon
Restoration Area:	PH2, PH7
Restoration Site Number:	PH2-1 WW, PH2-2 WW, PH7-1 WW
Restoration Activity Level:	4 – Weed control, hydroseeding/container planting throughout, supplemental irrigation throughout
Restoration Habitat Type:	Walnut Woodland

A. General Site Description	
A1: Location:	La Habra Heights, California Puente Hills Preserve - See Figure 1 overview of all Mitigation Areas. See Figure 3 for PH2, Figure 8 for PH7
A2: Access:	Gate at Powder Canyon Trailhead Parking Lot off of Fullerton Road
A3: Area:	3.5 acres
A4: Existing Infrastructure:	Maintained fire roads
A5: Jurisdictional Features:	No
A6: Environmental Sensitive Area:	California gnatcatcher critical habitat areas adjacent to restoration sites. • Environmental Awareness training for sensitive bird species will be conducted for restoration contractor personnel prior to

A. General Site Description	
	initiation of work. • Initial site clearing and plant material installation will be done outside of the breeding season. Majority of maintenance activities, weeding and irrigation will be done outside of the breeding season. • A 200-foot buffer will be established around identified California gnatcatcher nests and territories. Work will be avoided in buffer areas until young have fledged the nest. A 200 foot buffer is an acceptable buffer per the Technical Guidance from the United States Fish and Wildlife Service for restoration activities within the Puente Hills Preserve. • Impacts to existing native vegetation during restoration work will be avoided.
A7: Protective Measures for Nesting Avian Species:	• Environmental Awareness training will be conducted for restoration contractor personnel prior to initiation of work. • Initial site clearing and plant material installation will be done outside of the breeding season. Majority of maintenance activities, weeding and irrigation will be done outside of the breeding season. • 50-foot buffer for any nesting activity • 300-foot buffer for nesting raptors; or as determined appropriate by the Project Biologist • An appropriate and protective buffer will be established for Migratory Bird Treaty Act protected non-game species.
A8: Special-Status Plant Mitigation:	No

A. General Site Description	
A9: Tree Mitigation:[1]	Yes; blue elderberry, California black walnut, coast live oak (PH7), and toyon

B. Physical Characteristics of Restoration Area	
B1: Topography:	6° to 29° slopes
B2: Aspect:	Majority of restoration area south to southeast aspect
B3: Elevation:	670 to 880 feet
B4: Soils:	Clay loam
B5: Surface Rock and Rockiness:	Surface gravels present and no rock outcrops
B6: Existing Erosion and Sediment Control BMPs:	None
B7: Weed Percent Cover:	80 – 100%
B8: Dominant Weed Species:	Non-native annual grasses, black mustard (*Brassica nigra*)

[1] Tree Mitigation is non-jurisdictional and is subject to the success criteria in Table 8-7 of the HMMP.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
C1: Staging and Access:	All site work, staging, parking and access shall be restricted to the areas shown on Figure 1	
C2: Adaptive Management:	Adaptive Management Measures will be implemented per the HMMP as described in Chapter 8. Adaptive Management Measures to be implemented are provided in the following sections in the event drought conditions persist and if water supply is restricted by local or state regulations.	Adaptive Management includes the following remedial measures; weed eradication, replacement of container plantings, increased watering, herbivory protection, access restriction measures, and/or reseeding in areas to meet performance standards. Table 8-5, 8-7, and 8-8 shows success criteria and remedial actions to facilitate achieving success standards. Such actions will be taken promptly upon identification of problems and will be implemented as necessary. The Restoration Ecologist (RE) shall approve all remedial measures prior to implementation. If monitoring indicates the mitigation will not meet the success standards at the end of the five year monitoring period, SCE with assistance from the RE will perform analysis to determine which factors are contributing to the condition of the site and propose remedial actions to achieve success standards. If necessary, the RE will develop a remediation plan with approval of SCE immediately

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		following indication the site will not meet success criteria (Table 8-4, 8-5, 8-7, 8-8, and 8-9).
C3: Site Preparation		
Recontouring:	None	
Decompaction:	None	
Site Preparation Weed Control:	12 months of site preparation weed control between January and December and continuing if necessary until plant material installation with an irrigated grow-and-kill program. A minimum of three irrigated grow-and-kill events to ensure weed control of early, mid, and late season weed species. Timing shall be scheduled to target optimal weed control and weed removal shall be completed prior to seed set. Weed control methods shall include herbicide application and/or mechanical mowing/cutting. If drought conditions persist and water supply is restricted by local or state regulations grow-and-kill cycles will rely on natural rainfall to promote germination of weed species. Per the HMMP, success of the grow-and-kill cycles will be evaluated by the Restoration Contractor and Restoration Ecologist to determine the need for additional cycles. The grow-and-	The RE shall review weed control methods prior to implementation. The Restoration Contractor (RC) shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: initial site clearing timing and method; Grow-and-kill irrigation timing and duration; Grow-and-kill weed control timing, methods, and weeds controlled. Restoration sites shall be maintained free of trash, microtrash, and debris. The RC will make all reasonable efforts to remove trash and debris from every restoration site prior to installation and throughout the five-year maintenance period. Material will be properly disposed of off-site.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	kill period may be extended until effective weed control is accomplished since natural rainfall driven grow-and-kill programs may require more cycles to equal the control of an irrigated grow-and-kill program. If annual rainfall is significantly below average, then additional grow-and-kill cycles extending into the next season may be necessary. Prior to installation the restoration area will be cleared of all weed thatch to facilitate seed/soil contact.	Weeded material will be collected and properly disposed of off-site. Weed control shall occur in a 5 to 20-foot weed buffer adjacent to portions of Restoration Area PH2 and PH7 (approximately 0.56 acres) dominated by exotic species and is determined to be a weed seed source. Weed control methods shall consist of mowing non-native grasses and mustard species and selective use of herbicide for invasive species. Weeds shall be controlled prior to seed-set.
C4: Planting and Seeding		
Target Vegetation Community:	Walnut Woodland	
Sources of Plant Material:	To the extent possible, all plant material shall be obtained from native plant communities growing within the Puente Hills Preserve. For those species that function as erosion control or do not exist in large enough quantities within the Preserve, it will be necessary to either a) use seed stock from a seed collector/supplier that can be verified as collected within Los Angeles or Orange counties or b) extend the	The RC shall be responsible for obtaining seed from seed supplier. Seed tags indicating the Pure Live Seed (PLS) and Bulk rate must be attached to each bag of seed and provided to the RE.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	collection area on a species-by-species basis. Seed collection shall be as close as possible to the Preserve to maintain genetic integrity in nearby open space areas such as Chino Hills State Park and Peter F. Schabarum Regional Park or other appropriate inland areas in Los Angeles and Orange Counties.	
Methods of Propagation:	Container plants shall be contract grown by a nursery that has experience in growing native plants using propagules collected from approved sites as specified in the HMMP.	The RC shall contract with a plant nursery specializing in native plant propagation. Container plants will be contract grown by a nursery with at least three years of experience growing native plants from the target vegetation communities of the project area. The order shall be placed so that the plants have a well-developed root system and are conditioned prior to planting in Fall/Winter. Arbuscular mycorrhizal inoculum will be purchased and incorporated with the greenhouse mix according to the label at the time of transplantation to containers. The RC and RE will inspect all container plants during the growing stage and upon delivery for planting to verify the plants are the correct species and quantities, are free of weeds, pests, and disease, and showing signs of healthy growth. Plants shall be grown in the specified

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		container long enough to develop a root system that reaches the bottom of the container and forms a healthy root ball without becoming root bound. Any container plants that are not within these standards will be rejected.
Soil Amendments:	Endomycorrhizal inoculum shall be added to the hydroseed mix as specified in the HMMP. A fertilizer packet (10 grams weight) shall be added at the bottom of each planting hole prior to planting container plants. Each packet shall contain nitrogen, available phosphoric acid and soluble potash plus minor nutrients. The nitrogen, phosphorus, and potassium shall be coated with a polyurethane coating to provide 15.69 percent coated slow-release nitrogen, 5.09 percent coated slow-release available phosphate, and 6.8 percent slowly available soluble potash. Bio Paks® meeting these specifications are available from Reforestation Technologies Inc.	Arbuscular mycorrhizal inoculum shall be added to the hydroseed mix at a rate of 60 pounds per acre (approximately 3,600,000 live propagules per acre) based on the guarantee of the supplier. The supplier shall be a person or company with experience in Arbuscular mycorrhizal development. Commercially available *Glomus intraradices* is recommended since this is an ubiquitous species and will not impede the development of other native Arbuscular mycorrhizal species.
Seeding Method:	Two-step hydroseed application as specified in the HMMP in the Fall/Winter prior to container plant installation. The walnut woodland seed mix is provided in Table 1.	The RC shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: Hydroseeding date(s). Prior to seeding, the restoration area will be cleared of all weed thatch to facilitate seed/soil

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		contact. All hydroseed mixing shall be performed in a clean tank. The hydroseeder must be equipped with a continuous agitation and recirculation system to produce a uniform slurry and have the capacity to apply this slurry in a sweeping motion at a continuous rate. The RC shall spray designated areas with the slurry in a sweeping motion and in an arched stream until a uniform coat is achieved. The seed mix will be applied using a two-step hydroseed application. ***First Application*** The hydroseed mixture must be applied within one hour of preparation. • 500 pounds (lbs)/acre of virgin cellulose wood fiber • 60 lbs/acre of Arbuscular mycorrhizal inoculum • Specified seed mix ***Second Application*** The second application shall occur within two

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		hours following completion of the first application. • 1,500 lbs/acre of virgin cellulose wood fiber • 160 lbs/acre of organic M-binder (Ecology Control or comparable product)
Container Planting:	Container plant installation shall be in the Fall/Winter as specified in the HMMP following hydroseed application planted in groups at the specified spacing and aspect shown in Table 2.	The RC shall maintain an event log and provide the log to the RE. The log shall provide the following details per restoration area: quantity of container plants per species installed in each restoration area. The RE will inspect and approve all container plants prior to planting to verify the plants are the correct species and quantities, are free of weeds, pests, and disease, and showing signs of healthy growth. Any container plants that are not within these standards will be rejected. Plant layout will be determined based on micro topographic features and planting sites will be marked on site using colored pin flags by the RC under the supervision of the RE. Upon plant delivery, container plants shall be stored in a

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		designated temporary storage location. The RC is responsible for protection from herbivory, vandalism or theft, as well as maintenance (watering) of the plants while they are in temporary storage. All container plants shall be planted in accordance with the following specifications • Plants shall be planted with the roots untangled. Roots shall be protected from weather exposure during planting. • Planting holes shall be augured and be no more than 1.5 times the diameter and 2 times the depth of the container species to be planted. • Planting holes shall be backfilled 25 percent with excavated native soil and filled with water and allowed to drain completely prior to planting. Container plants must never be installed in planting holes with standing water; all water shall be allowed to settle and infiltrate through the soil prior to plant installation. • The specified fertilizer packet shall be

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		added to each planting hole just prior to planting. • Plantings shall be set in well-drained planting holes with the crown of the root ball no more than 0.5 inches above grade. Under no circumstances should the plant crown be buried. The soil around the planting shall be tamped down sufficiently to eliminate any air pockets in the soil. • A basin around the planting shall be constructed by creating a berm above the existing grade approximately 24 inches in diameter around the planting. • Each planting shall be sufficiently watered after installation so that water reaches the lower roots. ***Walnut Plantings*** The RE will inspect and approve the quality of the walnuts prior to planting to ensure that they are healthy, free of pests and disease, and are the proper size without observable damage. Walnut planting holes shall be approximately 24 inches deep and approximately 18 to 20 inches in diameter,

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		breaking the soil where required into fine particles to prepare a seed bed. Protective open bottom root guards shall be installed as specified in the Pest Control Section. The planting holes shall be backfilled. A total of three walnuts will be planted within each hole approximately 6 inches apart at a depth of 1 to 2 inches. The remaining soil will be backfilled into the planting holes. A basin around the planting shall be constructed by creating a berm above the existing grade approximately 24 inches in diameter around the plant.
C5: Irrigation		
Water Source:	1) La Habra Heights Water District – water tank 2) La Habra Heights Water District – backflow device	
Irrigation System:	A temporary overhead irrigation system shall be installed with the following design: • A mainline with lateral lines will be installed with gate-valves to separately manage the areas, as necessary depending on site soils and landforms. • Lateral lines shall be laid out along the contour of slopes so that the top of the slope can be managed separately from the lower slope. • Sprinkler heads shall be sized to accommodate the	The following temporary irrigation system shall be installed for 1-gallon oak and walnut container plants (for all irrigation designs): • PVC lateral lines will be laid out from the mainline to individual container plants • Full circle bubbler nozzles shall be installed at each planting location • Individual bubbler nozzles shall be

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	infiltration rate of the soil and landscape position. The size of the sprinkler heads and application rate will be determined after infiltration is evaluated in each area. • The system shall be laid out so that the wetted area from each sprinkler head has no more than a two- to three-foot overlap with adjacent sprinklers. The final layout design will depend on the system water pressure and the size of the sprinkler heads (based on the infiltration rate of the soil). • All sprinkler stems shall be fitted with on/off ball valves to allow for hose connections and hand watering of container plants at installation and during establishment, as necessary. These valves will also allow particular areas to be shut-off, as necessary. • Operation of the system will require management by a person with demonstrated previous experience irrigating native vegetation. Under no circumstances will the irrigation system be operated with any type of automatic timer. The system will be run manually and only when at least one restoration contractor crew person is on site. If drought conditions persist and water supply is	pressure regulating • The bubbler irrigation system shall be installed to operate independently from the overhead irrigation system The RE shall approve the irrigation design, layout, and schedules prior to installation of the system and implementation of watering events. Portable booster pumps may be necessary to pump water to upper portions of the restoration areas. Each pump shall have containment surrounding them and only operated when a member of the RC crew is on-site. **Alternate Temporary Irrigation System** If drought conditions persist and water supply is restricted by local or state regulations, the irrigation system will supply irrigation for the container plants only and shall be installed with the following design: ***Container Plant Groups*** • A mainline with lateral lines will be

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	restricted by local or state regulations, the irrigation system will consist of micro sprayers to supply irrigation for container plants only.	installed with gate-valves to separately manage the areas, as necessary depending on site soils and landforms. • PVC lateral lines shall be laid out from the mainline to each container plant group • Low precipitation rate rotary nozzles on risers shall be installed within each container plant group. Nozzles will be installed to water only the container planting group. The application rate will be determined after infiltration is evaluated for each area. • The system shall be laid out so that the wetted area from each low precipitation rate rotary nozzle head has slight overlap with adjacent nozzles. The final layout design will depend on the system water pressure (based on the infiltration rate of the soil). • All sprinkler stems shall be fitted with on/off valves to allow for hose connections and hand watering of container plants at installation and during establishment, as necessary.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		These valves will also allow particular areas to be shut-off, as necessary. • Operation of the system will require management by a person with demonstrated previous experience irrigating native vegetation. ***Tree Mitigation Species (1-gallon Oak and Walnut container plants)*** • PVC lateral lines will be laid out from the mainline to individual container plants • Full circle bubbler nozzles shall be installed at each planting location • Individual bubbler nozzles shall be pressure regulating • The bubbler irrigation system shall be installed to operate independently from the low precipitation rate irrigation system If alternate irrigation system required, then, toyon and lemonade berry plant spacing stays the same (Table 2), with hollyleaf redberry and elderberry plant spacing approximately 10 to 12 feet planted in groups around the toyon and

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		lemonade berry. Under no circumstances will the irrigation system be operated with any type of automatic timer. The system will be run manually and only when at least one restoration contractor crew person is on site.
Irrigation Timing:	The temporary irrigation system shall provide supplemental irrigation during the first three years of establishment as necessary for plant establishment. Irrigation events will depend on evapotranspiration between irrigation events and soil moisture. Irrigation will consist of wetting the soil to full field capacity (18 inches after planting; and 18-24 inches during plant establishment). After adequate germination of the seed mix, the soil shall be allowed to dry down to approximately 50 to 60 percent of field capacity in the upper 6 to 12 inches of soil before the next irrigation event.	Irrigation shall be implemented as needed to supplement or mimic natural rainfall patterns in such a way that the plants develop deep root systems to maximize survival and vigor after irrigation is removed. The RC shall be responsible for inspection and timely repair of any irrigation deficiency. The RC shall consult with RE to determine if extending or revising the watering schedule is necessary. Watering of restoration sites will be gradually reduced as the plantings become established and mature, and will be discontinued at least two years prior to final acceptance and approval of the restoration site.
C6: Erosion and Sediment Control		
Erosion and Sediment	No grading or ground disturbance will be performed; weeded areas will be hydroseeded and planted prior to	Erosion control measures will only be installed as needed with the approval of the RE.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
Control BMPs:	the onset of the rainy season per BMP.	
C7: Maintenance Recommendations		
Weed Control Timing:	Weeds shall be controlled, as necessary, before they set seed and/or before they reach 12 inches in height. The majority of the weed control effort will be required during winter through early summer. The number of maintenance visits shall be determined by need. Approximately four maintenance events shall be estimated for a normal rainfall season with greater or fewer weed events as dictated by fluctuations in rainfall timing and amount.	Nonnative plants will be suppressed for the duration of the maintenance and monitoring period throughout the restoration sites to achieve the nonnative cover Success Criteria presented in Table 8-9. Weed control activities shall include weed control throughout the restoration sites and within the planting basins. All planting basins, or an area 3 feet in diameter around each plant, will be maintained free of weeds during the duration of the maintenance period. Weed control in the weed buffer areas shall be implemented as necessary and shall be timed to control weed species prior to seed-set.
Weed Control Methods:	Weed control methods will include mainly hand-pulling and limited selective spot spraying of herbicides for high priority invasive species that may re-sprout from taproots or rhizomes. Limited use of selected herbicides is specified when no other effective alternative is available to remove and control weed species and will be authorized only by the Project Restoration Ecologist. Pre-emergent chemicals shall not be used at any time in	The RE shall review weed control methods prior to implementation. Productive plant materials containing viable seed shall be bagged, removed from the site, and disposed of at an approved location. Weeded material will be collected and properly disposed of off-site. Installed plant material

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	the restoration process.	and native plant volunteers shall not be damaged by weed control operations. ***Hand-pulling*** Shall be performed by hand-pulling or using hand tools. Weed removal shall not cause disruption to the root system or the above-ground structure of native plants. ***Herbicide application*** Herbicide control and herbicide product shall be approved by the RE prior to use. All herbicides shall be applied in accordance with all state and federal regulations and manufacturer's instructions by a Licensed Qualified Applicator under the direction of a Pest Control Advisor (PCA). Herbicides shall not be applied during or within 72 hours of a rain event, or when wind velocities exceed five miles per hour. Care will be taken to avoid spraying native species. Herbicide will be applied in a manner that minimizes drip and drift into adjacent areas. At no time shall herbicides be used to control weeds within planting basins.

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		Weed control in weed buffer areas will consist of mowing non-native annual grasses and mustard species and selective use of herbicide for invasive species.
Pest Control:	Root guards shall be used for walnut plantings using 18-gauge gopher wire with 1/2-inch mesh to protect against gopher herbivory. The root guard shall have an open bottom to so as not to inhibit plant roots. The root guard shall be buried a minimum of 24 inches below ground and extend above ground two to four inches. If browsing is observed, corrective measures such as organic, nontoxic deterrents and/or plant cages may be used and will be authorized only by the Project Restoration Ecologist.	Pest control products and methods shall be approved by the RE prior to implementation. Root guards shall be used for oak plantings in PH7 as described for walnut plantings. The RE will monitor the site for damaging plant insects and diseases. The use of pesticides will be avoided unless recommended by the RE for special problems. Any pesticide use will be proposed to SCE and the resource agencies for approval. Pesticide applications will be applied only by those with a valid Qualified Applicators License issued by the California Department of Pesticide Regulation. Pesticide will be applied according to the product label.
Protective Fencing:	Protective fencing shall be placed along public trails consisting of metal T-bar posts at 30-foot intervals with bright yellow rope attached at a height of approximately four feet. All-weather and graffiti protected signs shall be placed at a few key locations along the fencing with information explaining the sensitivity of the restoration area. The fence will serve	

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	as an effective barrier/deterrent to humans without inhibiting wildlife.	
Plant Replacement:	Re-seeding and container plant replacement shall occur per the HMMP if success standards are not met. Per the HMMP Chapter 8 Success Standards for Native Trees page 8-32 and 8-33, tree mitigation species will be over planted during implementation to allow for plant loss during establishment. Overplanting during initial installation will maximize establishment time for tree mitigation species and reduce or eliminate the need for plant replacement later in the restoration process. The following target densities and target numbers were determined for tree mitigation species and plant replacement will occur if survivorship falls below the target density or number. As such, the regulated tree mitigation survival criterion will apply to the target density or target number for tree mitigation species. *California Black Walnut* The target density for California black walnut is 100 per acre. The walnut woodland restoration areas will be overplanted by approximately two and a half times the target density. The target density, 350 total California black walnut over 3.5 acres, will successfully achieve	The RC is responsible for supplemental planting and seeding to achieve specified success requirements, except in those instances where the failure of the restoration areas to meet the survival and cover requirements is due to something beyond the control of the RC (catastrophic events such as flood, fire, etc.). In these circumstances, it would be the financial responsibility of Southern California Edison (SCE), the mitigation sponsor, to provide the supplemental materials. As specified in Mitigation Measure B-1a, if a fire occurs in a revegetation area during the monitoring period, SCE shall be responsible for a one-time replacement. Re-seeding may be prescribed as a remedial measure if the target percent absolute native cover is not met during the 120-day plant establishment period and maintenance/monitoring years 1 through 5. Re-seeding may be prescribed in areas 100 square feet or greater not meeting the

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	the tree mitigation requirement of 199 California black walnut trees. *Blue Elderberry* The target number for blue elderberry across all restoration areas is 322, the required tree mitigation number plus a 20 percent contingency. The target number of blue elderberry in the walnut woodland restoration areas is 64. The target number is derived by multiplying the percentage of blue elderberry to be planted in the walnut woodland restoration areas (20%) by the target number (322). *Toyon* The target number for toyon across all restoration areas is 60, the required tree mitigation plus a 20 percent contingency. The target number of toyon in the walnut woodland restoration areas is 17, derived by multiplying the percentage of toyon to be planted in the walnut woodland restoration areas (28%) by the target number (60). If water supply is restricted by local or state regulations and the sagebrush scrub and purple sagebrush scrub restoration areas are seeded only, the following target numbers for blue elderberry and toyon were	minimum cover requirement observed during monitoring visits. Reseeded areas must achieve an equivalent native species cover as the surrounding restored habitat by the end of the five-year maintenance/monitoring period based on performance monitoring described in Section D Restoration Site Maintenance and Biological Monitoring. See Table 8-4 for Absolute Cover Criteria for Vegetation Community Groups and Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures. Re-seeding shall be implemented by broadcast seeding. Seed may be broadcast onto the site by hand or using a hand-crank spreader. Seed will be premixed with dispersal agent (such as wheat bran) at approximately 25 percent of the overall volume. Prior to seeding the site may be watered to saturate the surface soil to aid in seed adhesion to the soil surface. Seed shall be mixed with a carrier as stated above, and divided into two equal parts. Half of the seed shall be hand-broadcast by walking across the entire area in a linear orientation appropriate for the site. The remaining half of the seed shall

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	determined and plant replacement will occur if survivorship falls below the target number. *Blue elderberry* Thirty additional blue elderberry container plants will be installed within the walnut woodland restoration areas to meet the tree mitigation requirements. Plant replacement for all failed blue elderberry plants will occur if no elderberry plants successfully establish from seed in the purple sage scrub and sagebrush scrub restoration areas. *Toyon* The target number of toyon plants will be 30 plants to meet the tree mitigation requirements. Plant replacement will occur if survivorship falls below 30 if no toyon successfully establish from seed in the purple sage scrub and sagebrush scrub restoration areas.	be hand-broadcast by walking across the site perpendicular to the first application. Seed areas shall be lightly raked to incorporate seeds into the soil. All replacement planting shall be in-kind unless otherwise specified by the RE. If adjustments to species for replacement planting are determined necessary by the RE, the replacement species must be on the approved plantings list for the associated habitat, and replacements be approved by SCE, and documented in the maintenance inspection logs. Container plant replacement will occur for non-tree mitigation species during the following phases: **120-day plant establishment period** Container plants (non-tree mitigation species) will have 100% survival following the 120-day plant establishment period. All failed container plants will be replaced during this phase of restoration. **Maintenance/Monitoring Years 1 and 2** Container plants (non-tree mitigation species)

C. Restoration Treatments		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		will have 80% survivorship in years 1 and 2. Failed container plants will be replaced as necessary to achieve 80% survivorship.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
D1: Maintenance		
Responsible Party	Restoration Contractor	
120-day Plant Establishment Period	Weekly visits to maintain installed plant material. Weed control and irrigation as needed.	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration area: irrigation timing/duration; weed event timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species. See Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		measures if success standards are not met. Restoration sites shall be maintained free of trash, microtrash, and debris. The RC will make all reasonable efforts to remove trash and debris from every restoration site prior to installation and throughout the five-year maintenance period. Material will be properly disposed of off-site.
Year 1 through 3	Timing for weed control will depend on annual weather patterns and may vary by year during the maintenance period with the most intense weeding maintenance in the first and second year. Approximately four maintenance events shall be estimated for a normal rainfall season with greater or fewer weed events as dictated by fluctuations in rainfall timing and amount. Irrigation will be timed as needed during the first three years of establishment and will depend on evapotranspiration between irrigation events and soil moisture.	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration area: irrigation timing/duration; weed event timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species. Weed control in the weed buffer areas shall be implemented as necessary and shall be timed to control weed species prior to seed-set. See Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
		measures if success standards are not met.
Year 4 and 5	Seasonal limited spot weeding of select invasive species will be implemented as necessary in years four and five to control weed species while minimizing disturbance to the restoration area.	The RC shall maintain a maintenance event log and provide the log to the RE. The log shall provide the following details per restoration area: irrigation timing/duration; weed event timing, methods, and weeds controlled; tally of dead/diseased container plants; plant replacement date (seed and container plants) and tally of replaced container plants by species. Weed control in the weed buffer areas shall be implemented as necessary and shall be timed to control weed species prior to seed-set. See Table 8-5, 8-7, and 8-8 for Success Standards and Adaptive Management Measures for Mitigation Sites that includes remedial measures if success standards are not met. The RC will be responsible for removing the irrigation system following final acceptance and approval of the restoration sites.
D2: Maintenance Monitoring		

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
Responsible Party	Restoration Ecologist	
120-day Plant Establishment Period	Weekly visits in the first month following installation and every two weeks in months two and three	
Quarterly Monitoring	Four visits per year in maintenance and monitoring Year 1 through Year 5 (following the 120-day plant establishment period). Timing will vary depending on annual weather patterns.	
D3: Biological Monitoring		
Responsible Party	Restoration Ecologist	
Annual Monitoring	Performance monitoring will be conducted annually in maintenance and monitoring Years 1 through 5. Timing will vary depending on annual weather patterns. <u>Monitoring Methods</u> In lieu of the Monitoring Methods per the HMMP, point-intercept transects have been selected as the most appropriate monitoring method to meet the habitat restoration objectives of the Offsite Mitigation at the Puente Hills Preserve. This method is well suited to measure semiarid woodlands and will provide an efficient and reliable method for estimating cover and	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	species composition of the restoration areas. As documented in a study by Deutschman and Strahm[2] (2008) that compared visual cover estimation, point-intercept transects, and quadrat sampling in coastal sage scrub, chaparral and grassland habitat, the point-intercept transect method was the most accurate and precise method for monitoring species cover. The point-intercept method also efficiently captures the composition and structure of the herbaceous understory in woodlands. Since herbaceous species are typically beneath the tree and shrub canopy layer, cover tends to be underestimated in large sample plots when estimating cover visually. Point-intercept is considered to be the most objective and least biased method for measuring cover compared to visual estimation and line-intercept transects since cover is based simply on whether vegetation touches the sampling bar at a sample point or not (Bonham[3] 1989). The point-intercept method will also more reliably detect interannual changes in cover compared to visual estimation. As documented by Greig-Smith[4]	

[2] Deutschman, D. and S. Strahm. 2008. Improving Statistical Sampling and Vegetation Monitoring for Open Space in Central Orange County. Report prepared for the Nature Reserve of Orange County. February 2008. 57 pp.
[3] Bonham, C.D. 1989. Measurements for Terrestrial Vegetation. New York, NY: John Wiley and Sons.
[4] Greig-Smith, P. (1983). Quantitative Plant Ecology. 3rd edition. Berkeley: University of California Press.

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	(1983) cover estimates deviated by the group mean by as much as 25% between observers meaning large changes in cover would have to occur before it can attributed to factors other than observer bias. <u>Sample Design and Methods</u> Sampling within the walnut woodland habitat will be stratified by the restoration areas, with one point-intercept transect per restoration area with a minimum polygon size of 0.25 acre. Approximately one transect will be placed for every 2-3 acres, depending on the diversity of site characteristics of restoration areas, including soil type, slope aspect and landscape features that may influence hydrology or infiltration of water. A total of three transects will be read in the walnut woodland habitat. Locations of transects will be determined randomly using a numbered grid system. A 50-meter tape will be stretched taut at the randomly selected locations. Fifty points will be sampled at each transect along the tape at 1-meter intervals starting at 1 meter and ending at 50 meters. A one-meter long, ¼ inch diameter round steel bar will be placed perpendicular to the transect line at each sampling point, consistently on the same side of the tape. All live species that contact the bar, or in the case of	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	overhanging vegetation, intercept the upward projection of the bar, will be counted and recorded. If no vascular plants are intercepted at the sample point, it will be recorded as bare ground or plant litter. Seedlings and juveniles of trees, shrubs, and sub-shrubs will be recorded. Seedlings will be defined as species germinated during the sampling year with a non-woody base and juveniles as individuals germinated within the sampling year with development of woody material at the base. <u>Monitoring Variables</u> Variables for quantitative performance monitoring were selected based on the phenological and establishment-related characteristics of the restoration habitat and the success standards outlined in the HMMP. Variables selected include the absolute cover of native species, exotic species, bare ground and plant litter; species diversity; and survivorship counts of container stock. Cover data will be reported as absolute percent cover determined by dividing the total number of hits for each plant species or ground cover by the total number of points on the transect. Therefore, the total percent reported for absolute cover may be greater than 100	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	percent because of overlap of plants at each sampling point. Sampling for diversity will consist of listing all the species present along the 50-meter point-intercept transect line and within a 1-meter belt on either side of the transect line. Listing plant species within the 2-meter belt will allow for detection of species that may be missed along the point-intercept transect line. Species diversity will be reported as species richness, the number of species encountered in the line and belt transects. Survivorship of container planted stock will be determined by counting the total number of dead container plants across all restoration areas. Survivorship counts of container stock will be conducted for non-tree mitigation species in the first two years of performance monitoring only. Monitoring and success criteria per the HMMP for tree mitigation species will include survivorship counts along with an assessment on plant health and vigor as described in the HMMP and will be conducted for tree mitigation species in performance monitoring years one through five.	

D. Restoration Site Maintenance and Biological Monitoring		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
	Photo Point Monitoring Permanent photo points will be established to conduct photographic documentation of restoration progress and the development of the restoration habitat. Photo points will be established prior to implementation to provide a representative overview before restoration for comparison to "after photos," taken annually during performance monitoring. The geographic coordinates will be recorded using a sub-meter precision global positioning system (GPS) along with the general compass direction for each photo point location. One permanent photo point will be established for each restoration area.	

E. Success Standards		
Activity/Task	**Approved Execution Plan**	**Additional Information from Habitat Mitigation and Monitoring Plan**
E1: Success Standards for Mitigation Sites:	Success standards per the HMMP: • Absolute Native Cover Criteria for Vegetation Community Groups Table 8-4 • Success Standards and Adaptive Management Measures for Mitigation Sites Table 8-5 • Success Criteria for Nonnative Cover Table 8-9	See Table 8-4, 8-5, and 8-9 for cover criteria, success standards, and adaptive management measures if success standards are not met.
E2: Success	Success standards per the HMMP:	See Table 8-7, 8-8, and 8-9 for cover criteria,

Standards for Regulated Tree Mitigation:	• Success Standards for Regulated Native Tree Mitigation Table 8-7 • Success Standards and Adaptive Management Measures for Mitigation Sites Table 8-8 • Success Criteria for Nonnative Cover Table 8-9	success standards, and adaptive management measures if success standards are not met.

Table 1 Walnut Woodland Seed Mix – 3.5 acres

Scientific Name	Common Name	Minimum Purity/Germination[1]	Pounds of Bulk Seed per Acre[2]
Canopy and Shrub Layer			
Artemisia californica	California sagebrush	15/50	0.5
Eriogonum fasciculatum	California buckwheat	10/65	1.0
Isocoma menziesii var. vernonioides	Coastal goldenbush	40/30	1.5
Malosma laurina	Laurel sumac	98/70	0.5
Salvia leucophylla	Purple sage	80/40	0.5
Toxicodendron diversilobum	Poison oak	N/A	0.2
Herbaceous Understory			
Acmispon maritumus[3]	Coastal lotus	98/75	1.5
Ambrosia confertiflora	Weak leaved burweed	N/A	0.5
Bromus carinatus californica	California brome	95/80	3.5
Corethrogyne filaginifolia	Common sandaster	15/30	0.5
Deinandra fasciculata[3,4]	Fascicled tarweed	20/80	0.5
Festuca microstachys[3,4]	Small fescue	90/80	6.0
Lupinus bicolor[3,4]	Miniature lupine	98/85	2.0
Lupinus truncatus[3,4]	Collar lupine	98/85	1.5
Melica imperfecta	Melic grass	90/60	1.0
Phacelia distans[3]	Common phacelia	70/60	0.5
Phacelia ramosissima[3]	Branching phacelia	95/80	0.2
Plantago erecta[3,4]	California plantain	98/75	20.0
Stipa lepida[4,5]	Foothill needlegrass	70/60	2.5
Stipa pulchra[4,5]	Purple needlegrass	70/60	2.5
		Total Pounds Bulk Seed per Acre	**46.9**

[1] Minimum germination may be adjusted after germination tests on special local collection.
[2] Bulk seed rate may be adjusted depending upon results of tests for germination.
[3] Erosion control and nurse crop species
[4] Seed stock verified as collected in inland Orange or Los Angeles Counties.
[5] Seed of *Stipa* spp. shall be de-awned.
N/A = Information about seed purity and germination not available

Table 2 Walnut Woodland Container Plant Palette – 3.5 acres				
Scientific Name	**Common Name**	**Container Size**	**Plant Spacing Within Groups[1] (feet)**	**Plants per Acre**
Heteromeles arbutifolia	Toyon	D-40	20′	30
Juglans californica	California black walnut	Walnuts[2]	5′	150
Juglans californica	California black walnut	1 gallon	20′	100
Quercus agrifolia[3]	Coast live oak	1 gallon deep pots	25′	20[4]
Rhamnus ilicifolia	Hollyleaf redberry	D-40	20′	30
Rhus integrifolia	Lemonade berry	D-40	15′	30
Sambucus nigra ssp. caerulea	Blue elderberry	D-40	15′	60
			Total Plants per Acre	**400**

[1] Spacing = Feet on-center distance from other container planted shrub/tree species
[2] Three walnuts to be planted within each planting hole approximately 6 inches apart at a depth of 2 inches.
[3] *Quercus agrifolia* to be planted in PH7 only.
[4] To be planted in PH7 only. Amount not included in total plants per acre.

FINAL - Execution Plan for TRTP
Off-Site Mitigation Puente Hills Preserve
Walnut Woodland Habitat Restoration

The following tables are from the Habitat Mitigation and Monitoring Plan Segments 7 and 8 Mitigation Measure B-1a Version 4.0 prepared by ICF International for Southern California Edison. The tables show the success criteria for the restoration areas and potential adaptive management measures for implementation to achieve the success standards for the project.

Table 8-4. Absolute Cover Criteria for Vegetation Community Groups

	Target Percent Absolute Cover Monitoring Year				
Vegetation Community Group*	1	2	3	4	5
Woodland Vegetation	10	15	20	30	50
California Walnut Woodland					
Coast Live oak Woodland					
Nonnative Woodland					
Sycamore Woodland					
Shrub-dominated Vegetation	10	20	35	50	60
Mixed Chaparral					
Riversidian Alluvial Fan Sage Scrub					
Coastal Sage Scrub					
Mule Fat Scrub					
Riparian Vegetation	10	20	40	60	80
Freshwater Marsh					
Ruderal Wetland					
Southern Coast Live Oak Riparian Forest					
Southern Cottonwood Willow Riparian					
Herbaceous Vegetation	10	15	20	30	35
California Annual Grassland					

* Vegetation Community Grouping as presented in the FEIR and FEIS Mitigation Ratio Table

[i] Anthropogenic vegetation will be reseeded with a native seed mix for stabilization purposes.

[ii] Each restoration site is expected to attain the cover requirements for the respective vegetation community group. The success measurements for each independent community will not be averaged for comparison to the success standards.

[iii] Target percent cover criterion at individual sites may be modified based on site-specific conditions that limit the ability of a site to attain the target percent cover specified above. Examples of potential need for modification include a high presence of weeds, or low vegetative cover at the site prior to disturbance, or a high presence of weeds immediately adjacent to the site. Such modification for adjustment will be submitted to the CPUC for approval prior to application.

Table 8-5. Success Standards and Adaptive Management Measures for Mitigation Sites

Milestone	Success Standards	Adaptive Management Measure(s)
120-day plant establishment period	Seeded areas will have sufficient coverage and uniform application. 10% native cover for seeded areas measuring 100 square feet and larger. Container plantings will have 100% survival. Nonnative annual cover cannot exceed 20%. Nonnative perennial species cover cannot exceed 5%.[a]	If success standards are not met, remedial measures may include: • Remedial seeding, • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to site as necessary.
Year 1 through Year 4	Areas will have a minimum native cover as stipulated in Table 8-4. Container plantings will have 80% survival during years 1 and 2. Nonnative annual cover cannot exceed 10%. Nonnative perennial species cover cannot exceed 1%.	If success standards are not met, remedial measures may include: • Remedial seeding, • Adjustments to supplemental watering (through year 3 only), • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to the site as necessary. Beginning in year 3, if the sites are not meeting the vegetation native cover criterion, ocular estimates (as described above under "Biological Monitoring") will be performed of the adjacent similar areas and compared to biological monitoring results from the site.
Year 5	Areas will have a minimum native cover as stipulated in Table 8-4. Nonnative annual cover will be less than 10%. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

a. Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

b. Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Table 8-7. Success Standards and Adaptive Management Measures for Regulated Native Tree Mitigation

Milestone	Success Standards	Adaptive Management Measure(s)[a]
120-day plant establishment period	Tree species will have 100% survival in Good or Fair condition. Nonnative annual cover cannot exceed 20% within 2 meters of plant trunk. Nonnative perennial species cover cannot exceed 5% within 3 meters of plant trunk.2	If success standards are not met, remedial measures may include: • Plant additional container stock. • Increase supplemental watering. • Increase protection measures against herbivory. • Increase weed abatement activities as necessary. • Other adjustments to site as necessary.
Year 1 through Year 4	Tree species will have 85% survival in Good or Fair condition. Nonnative annual cover cannot exceed 10% within 2 meters of plant trunk. Nonnative perennial species cover cannot exceed 1% within 3 meters of plant trunk.b	If success standards are not met, remedial measures may include: ● Plant additional container stock. ● Increase supplemental watering (through year 3 only). ● Increase protection measures against herbivory. ● Increase weed abatement activities as necessary. ● Other adjustments to site as necessary. Beginning in year 3, if the sites are not meeting the vegetation cover criterion, a qualitative assessment will be performed of the adjacent similar areas; the site is considered to have met the success criteria if the qualitative cover of the adjacent similar vegetation is equal to the qualitative cover on the site.
Year 5	Tree species will have 85% survival in Good or Fair condition. Nonnative annual cover will be less than 10% within 2 meters of plant trunk. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

a. Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

b. Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow starthistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Table 8-8. Success Standards and Adaptive Management Measures for Mitigation Sites

Milestone	Success Standards	Adaptive Management Measure(s)
120-day plant establishment period	Seeded areas will have sufficient coverage and uniform application. 10% native cover for seeded areas measuring 100 square feet and larger. Container plantings will have 100% survival. Nonnative annual cover cannot exceed 20%. Nonnative perennial species cover cannot exceed 5%.[b]	If success standards are not met, remedial measures may include: • Remedial seeding, • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to site as necessary.
Year 1 through Year 4	Minimum native cover as stipulated in Table 8-4. Container plantings will have 80% survival (for the first two years). Nonnative annual cover cannot exceed 10%. Nonnative perennial species cover cannot exceed 1%.	If success standards are not met, remedial measures may include: • Remedial seeding, • Adjustments to supplemental watering (through year 3 only), • Plant additional container stock, • Increase weed abatement activities, • Other adjustments to the site as necessary. Beginning in year 3, if the sites are not meeting the native vegetation cover criterion, ocular estimates (as described above under "Biological Monitoring") will be performed of the adjacent similar areas and compared to biological monitoring results from the site.
Year 5	Minimum native cover as stipulated in Table 8-4. Nonnative annual cover will be less than 10%. Nonnative perennial and target nonnative annual species cover will be 0%.	If success standards are not met, remedial measures will be evaluated by the RE consultation with the RC and SCE. See Contingency Measures in Chapter 8 below.

a. Remedial measures, including reseeding and/or replacement of container plants in previously planted areas, will be performed at the expense of the RC.

b. Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

* Refer to Table 8-4 for vegetation cover criteria for respective vegetation community cover groups.

Table 8-9. Success Criteria for Nonnative Cover

	Target Nonnative Percent Cover Monitoring Year				
Nonnative Cover Type*	1	2	3	4	5
Nonnative annual cover	20	10	10	10	10
Nonnative perennial cover[a]	5	1	1	1	0

[a] Target nonnative species include annual veldt grass (*Ehrharta longiflora*), yellow star-thistle (*Centaurea solstitialis*), pampas grass (*Cortaderia selloana*), Bermuda grass (*Cynodon dactylon*), sweet fennel (*Foeniculum vulgare*), perennial pepperweed (*Lepidium latifolium*), tree tobacco (*Nicotiana glauca*), and castor bean (*Ricinus communis*) (see Attachment G "Cal-IPC List of Highly Invasive Plant Species").

Note: Each independent nonnative cover type is expected to not exceed target percentage requirements for the respective cover type (annual/perennial). The success data measurements for each independent nonnative cover type will not be averaged for comparison to the success standards.

EXHIBIT C
Mandatory Job Walk Meeting Location

Powder Canyon

Black Walnut Trail

Nogales Trail

Entrance to Trailhead

Parking Lot and Meeting Site

Powder Canyon Trail

Fullerton Rd.

N Harbor Blvd

Yorkshire Way

Fullerton Rd

Cottontail Pl

Gray Squirrel Trail

836 ft

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Google earth

Exhibit C – Powder Canyon Trailhead

EXHIBIT D
Draft Contract

PUENTE HILLS HABITAT PRESERVATION AUTHORITY **RESTORATION CONTRACT**

7702 Washington Avenue, Suite C
PHONE (562) 945-9003, FAX (562) 945-0303

This Restoration Contract (hereinafter Contract or Agreement) is entered into this __ day of MONTH, 2016, (Execution Date) between the Puente Hills Habitat Preservation Authority, a joint powers authority established pursuant to Government Code Section 6500 et. seq., hereinafter referred to as HABITAT AUTHORITY and COMPANY NAME hereinafter referred to as the CONTRACTOR. For valuable consideration HABITAT AUTHORITY and CONTRACTOR agree as follows.

A. Restoration Contract Documents: All rights and obligations of HABITAT AUTHORITY and CONTRACTOR are fully set forth and described in the Restoration Contract Documents (Contract Documents). The Contract Documents include the documents also set forth in Section 1.1 of the General Conditions and the following documents which are incorporated herein by reference:

1. The Execution Plans, maps and all requirements, descriptions and instructions included in the Request for Proposal dated DATE, 2016 and attached hereto as Exhibit A.

2. The CONTRACTOR'S accepted proposal dated DATE, 2016 attached hereto as Exhibit B.

3. Statement of per diem prevailing wages attached hereto as Exhibit C.

4. Covenants and General Conditions attached hereto.

5. List of subcontractor(s), location(s) of place of business, and California contractor's license number(s) attached hereto as Exhibit D.

6. The CONTRACTOR'S Acknowledgement of Statutory Provisions for Payments and Assignments under Public Contracts Code Section 7103.5 and 20104.50 attached as Exhibit E.

7. CONTRACTOR'S Statement of Nondiscrimination attached hereto as Exhibit F.

8. CONTRACTOR'S Executed Indemnification and Hold Harmless Agreement and Waiver of Subrogation and Contribution and Certificate of Insurance attached hereto as Exhibits G1 and G2.

9. CONTRACTOR'S Statement of Acknowledgement to Secure Workers Compensation Coverage and Certificates of Workers Compensation and Liability Insurance attached as Exhibits H1 and H2.

10. CONTRACTOR'S Acknowledgement of Statutory Provisions for Resolution of Construction Contract Claims of less than $375,000 pursuant to California Public Contract Code Sections 20104 as Exhibit I.

11. CONTRACTOR'S Noncollusion Declaration under Public Contract Code Section 7106. (Included in Exhibit B)

12. HABITAT AUTHORITY Safety Requirements attached as Exhibit J.

B. Project: The project is the defined as the SCE TRTP Mitigation Project, the location of the project and work is depicted in the Request for Proposals.

C. Work: Work includes all labor and materials, with the exceptions of seeds, necessary to complete the restoration work set forth in the Execution Plans and Contract Documents, and in accordance with the Standard Specifications for Public Works Construction (The Greenbook), 2012 Edition.

D. Compensation: HABITAT AUTHORITY agrees to pay CONTRACTOR the sum of $XXXXXXXXXXXXXXXXXXX pursuant to the terms of the General Conditions. The term contract sum used hereafter means compensation.

CONTRACTOR
COMPANY NAME
Contract contact:
EMAIL
CONTACT NAME
OFFICE PHONE
MOBILE PHONE

HABITAT AUTHORITY
7702 Washington Ave., Suite C
Whittier, CA 90602
562-945-9003

_____
Authorizing Signature
NAME
TITLE

_____
Signature
Andrea Gullo, Executive Director

FOR OFFICE USE ONLY

Agreement Amount	$	CONTRACT NUMBER	TAX ID #
Amt. Prev. Encumbered	$---	Project Name: SCE TRTP Mitigation Project	
Total	$		

CONVENANTS AND GENERAL CONDITIONS

1) RESTORATION CONTRACT DOCUMENTS

a) The Contract Documents consist of the Contract Documents described in Section A above and the Covenants and Conditions of the Contract, Exhibits to the Contract, General Conditions, Special Conditions, if any, the Specifications, all Addenda issued prior to award, and all modifications thereto. A modification is (1) a written amendment signed by both parties, (2) a change order, (3) a written interpretation issued by the HABITAT AUTHORITY, (4) a written order for a minor change in the Work issued by the HABITAT AUTHORITY. A modification may be made only after award of contract.

b) The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral, including the bidding documents. The Contract may be amended or modified only by modification as defined in Subparagraph a).

c) The Contract Documents shall be signed in duplicate by the HABITAT AUTHORITY and CONTRACTOR.

d) By executing the Contract, the CONTRACTOR represents that CONTRACTOR has visited the site, familiarized itself with the local conditions under which the Work is to be performed, and correlated its observations with the requirements of the Contract Documents.

e) The intention of the Contract Documents is to include all labor, materials, equipment, and other items necessary for the proper execution and completion of the Work.

f) All drawings, specifications and copies thereof furnished by the HABITAT AUTHORITY are, and shall remain, property of the HABITAT AUTHORITY.

2) CONTRACT ADMINISTRATION

a) The HABITAT AUTHORITY under contract with Land IQ shall provide general administration of the Contract including performance of the functions hereinafter described. The HABITAT AUTHORITY shall provide CONTRACTOR with the name and contact information for Land IQ on site manager. The HABITAT AUTHORITY shall at all times have access to the Work, including periods of preparation to commence the Work and during progress of the Work. The CONTRACTOR shall provide facilities for such access so the HABITAT AUTHORITY may perform its functions under the Contract Documents.

b) The HABITAT AUTHORITY has the authority to reject Work which does not conform to the Contract Documents. Whenever the HABITAT AUTHORITY considers it necessary or advisable to insure the proper implementation of the intent of the Contract Documents, HABITAT AUTHORITY will have authority to require the CONTRACTOR to stop the Work or any portion thereof, or to require special inspection or testing of the Work.

c) The HABITAT AUTHORITY agrees to prepare all change order(s), and will have authority to order minor changes in the Work.

d) The HABITAT AUTHORITY agrees to conduct inspections to determine the date of final completion of the Work. CONTRACTOR agrees to assemble and provide HABITAT AUTHORITY with written guarantees and related documents required by the Contract.

e) The parties agree that HABITAT AUTHORITY and Land IQ are not responsible or liable for the acts or omissions of the CONTRACTOR, any Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.

3) HABITAT AUTHORITY and RELATED PARTIES

a) The HABITAT AUTHORITY is the Puente Hills Habitat Preservation Authority, a joint powers entity of the City of Whittier, County of Los Angeles, and the Sanitation Districts of Los Angeles County.

b) The HABITAT AUTHORITY is under contract with the Mountains Recreation and Conservation Authority (MRCA) to provide on-site ranger services.

c) The HABITAT AUTHORITY is under contract with Land IQ to provide contract administration including on-site management of the Project and Work.

d) The MRCA and Land IQ are hereinafter known as related parties.

4) THE CONTRACTOR

a) The CONTRACTOR_____

b) The CONTRACTOR agrees to carefully study and compare the Contract, Conditions of the Contract, Exhibits to the Contract, Addenda and Modifications, and agrees to report in writing any error, inconsistency or omission it may discover. CONTRACTOR shall not be liable to the HABITAT AUTHORITY for any damage resulting from any such errors, inconsistencies or omissions reported and accepted by HABITAT AUTHORITY.

c) The CONTRACTOR agrees to supervise and direct the Work using its best skill and attention. CONTRACTOR shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

d) Unless otherwise specifically noted, the CONTRACTOR agrees to provide and pay all labor, materials, equipment, tools, construction equipment and machinery, transportation, and other facilities and services necessary for the proper execution and completion of the Work.

e) The CONTRACTOR agrees at all times to enforce strict discipline and good order among its employees and shall not employ on the Work any person not skilled in the task assigned.

f) The CONTRACTOR warrants to the HABITAT AUTHORITY that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that

all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All work not so conforming to these standards may be considered defective. If required, the CONTRACTOR shall furnish satisfactory evidence as to the kind and quality of materials and equipment. No substitute "or equal" material or equipment shall be installed without written approval of HABITAT AUTHORITY.

g) The warranty provided in herein shall be in addition to and not in limitation of any other warranty or remedy required by law or by the Contract Documents.

h) The CONTRACTOR agrees to pay all sales, consumer, use and other similar taxes, if any, required by law.

i) The CONTRACTOR agrees to secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the Work.

j) The CONTRACTOR agrees to employ a competent superintendent, who speaks English, who shall be in attendance at the Project site during the progress of the Work. The superintendent shall represent the CONTRACTOR and all communications given to the superintendent shall be as binding as if given to the CONTRACTOR. Important communications will be confirmed in writing. Other communications will be so confirmed on written request in each case.

k) The CONTRACTOR agrees to be responsible to the HABITAT AUTHORITY for the acts and omissions of all CONTRACTOR's employees and all Subcontractors, their agents and employees, and all other persons performing any of the Work under a contract with the CONTRACTOR or Subcontractors.

l) The CONTRACTOR immediately after receiving the Notice to Proceed from HABITAT AUTHORITY agrees to prepare and submit for the HABITAT AUTHORITY's approval a work schedule for the Work in compliance with the Execution Plans. The work schedule shall provide in sufficient detail the chronological relationship of all activities of the Work, including but not limited to start and completion dates of various activities. Said schedule should include time for procurement of materials, scheduling of equipment, and the removal, protection, or relocation of utilities if said activities are pertinent to CONTRACTOR's obligations under the Contract.

m) The CONTRACTOR agrees to comply with California Labor Code Section 1777.5 that sets forth the provisions for the employment of properly registered apprentices, and agrees to not discriminate against apprentices as set forth in Labor Code section 1777.6.

n) The CONTRACTOR agrees to not pay less than prevailing per diem wages for each craft, classification, or type of worker as set by the State of California Department of Industrial Relations and documented in Exhibit C attached hereto. CONTRACTOR agrees to strictly adhere to the provisions of the California labor Code regarding travel, hours of work daily and per week, overtime, weekend and holiday work.. CONTRACTOR agrees to forfeit to the HABITAT AUTHORITY the penalties for violation prescribed in the Labor Code.

o) The CONTRACTOR agrees to use vehicles clearly identified with company logo.

p) The CONTRACTOR agrees to confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents, and shall not unreasonably encumber the site with any materials or equipment.

q) The CONTRACTOR agrees at all times to keep the premises free from accumulation of waste materials or rubbish caused by CONTRACTOR's operations. At the completion of the Work CONTRACTOR shall remove all waste materials, rubbish, tools, construction equipment, machinery and surplus materials from and about the site. If the CONTRACTOR fails to remove waste materials or rubbish, the HABITAT AUTHORITY may do so and the cost thereof shall be charged to the CONTRACTOR.

r) The CONTRACTOR shall protect, defend, indemnify and hold harmless the HABITAT AUTHORITY and its Related Parties as provided in Exhibit G1.

s) The CONTRACTOR agrees that any claim by an employee of CONTRACTOR, Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts CONTRACTOR and/or Subcontractor may be liable, brought against the HABITAT AUTHORITY and it related parties shall be covered through worker's compensation insurance procured by CONTRACTOR and/or Subcontractor and the term and condition of Exhibit G1.

t) The obligations of the CONTRACTOR set forth above shall not extend to the liability of the HABITAT AUTHORITY its Related Parties agents, or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the HABITAT AUTHORITY it agents, or employees, provided such preparation of said documents, or giving or failure to give said directions or instructions, are the primary cause of the injury or damage.

u) The CONTRACTOR shall hold a valid California C-27 Contractor's License. CONTRACTOR shall keep and maintain the C-27 Contractor's License current throughout the term of the Contract.

v) The CONTRACTOR agrees that it will not contract with a native plant propagator without the written approval of the HABITAT AUTHORITY. All native seed will be supplied by HABITAT AUTHORITY.

5) SUBCONTRACTORS

a) A Subcontractor is a person or organization who has a direct contract with the CONTRACTOR to perform any of the Work at the site.

b) A Sub-subcontractor is a person or organization who has a direct or indirect contract with a Subcontractor to perform any of the Work at the site.

c) Nothing contained in the Contract Documents shall create any contractual relation between the HABITAT AUTHORITY and any Subcontractor or Sub-subcontractor.

d) The CONTRACTOR shall not contract with any Subcontractor who has not been accepted by the HABITAT AUTHORITY

e) If the HABITAT AUTHORITY requires a change of any proposed Subcontractor or person or organization previously accepted by them, the Contract Sum shall be increased or decreased by the difference in cost occasioned by such change and an appropriate change order shall be issued.

f) The CONTRACTOR agrees to not make any substitution for any Subcontractor that has been accepted by the HABITAT AUTHORITY, unless the substitution is accepted in writing by the HABITAT AUTHORITY.

g) All Work performed for the CONTRACTOR by a Subcontractor shall be pursuant to an appropriate agreement between the CONTRACTOR and the Subcontractor (and where appropriate between Subcontractors and Sub-subcontractor) which shall contain provisions that:

   i) preserve and protect the rights of the HABITAT AUTHORITY under the Contract and the indemnification rights of all other parties as set forth in this contract with respect to the Work to be performed under the subcontract so that the subcontracting thereof will not prejudice such rights;

   ii) require that such Work be performed in accordance with the requirements of the Contract Documents;

   iii) require submission to the CONTRACTOR of applications for payment under each subcontract to which the CONTRACTOR is a party, in reasonable time to enable the CONTRACTOR to invoice the HABITAT AUTHORITY.

   iv) require that all claims for additional costs, extensions of time, damages for delays or otherwise with respect to subcontracted portions of the Work be submitted to the CONTRACTOR (via any Subcontractor of Sub-subcontractor where appropriate) in the manner provided in the Contract Documents for like claims by the CONTRACTOR upon the HABITAT AUTHORITY;

   v) obligate each Subcontractor specifically to consent to all the conditions of this contract.

h) The CONTRACTOR agrees to pay each Subcontractor, upon receipt of payment from the HABITAT AUTHORITY, an amount equal to the percentage of completions allowed to the CONTRACTOR. CONTRACTOR agrees upon receipt to provide Habitat Authority with copies of all Subcontractor invoices and proof of prompt payment. If CONTRACTOR defaults in its obligation to pay each Subcontractor HABITAT AUTHORITY at its sole discretion may require each Subcontractor to submit copies of its invoices to CONTRACTOR and to HABITAT AUTHORITY and may make joint payments to CONTRACTOR and Subcontractor for Subcontractor's invoices.

i) The HABITAT AUTHORITY shall not have any obligations to pay or to see to the payment of any monies to any Subcontractor except as may otherwise be required by law or pursuant herein.

j) The CONTRACTOR agrees to employ only those Subcontractors who possess current Contractor's Licenses of the type and class appropriate to the Work performed by said Subcontractors.

6) HABITAT AUTHORITY'S RIGHT TO AWARD SEPARATE CONTRACTS

a) The HABITAT AUTHORITY reserves the right to award other contracts in connection with other portions of the Project under these or similar Conditions of the Contract.

7) MISCELLANEOUS PROVISIONS

a) This Contract is governed by laws of the State of California and venue for any lawsuit shall be Los Angeles County.

b) The HABITAT AUTHORITY and the CONTRACTOR each agrees to bind itself, related parties, its partners, successors, assigns and legal representative of such other party in respect to all covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract without the written consent of the other, nor shall the CONTRACTOR assign any monies due or to become due hereunder, without the previous written consent of the HABITAT AUTHORITY.

c) Written notice shall be deemed to have been duly served if delivered in person or sent by registered or certified mail to the business addresses set forth on page 2 herein.

d) Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party or of any of its employees, agents or others for whose acts that party is legally liable, claim shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage but in no event will the time to seek legal remedy for such a claim be extended beyond the time allowed by law. Nothing in this paragraph is intended to waive the applicable statute of limitations for claims for bodily injury, personal injury, property damage, or breach of contract.

e) The CONTRACTOR agrees to maintain the performance bond and the payment bond for the term of the contract. If the admitted surety insurer becomes insolvent during the terms of the bonds the CONTRACTOR agrees to immediately obtain substitute bonds from a HABITAT AUTHORITY approved and California admitted surety-insurer. The premiums shall be paid by the CONTRACTOR.

f) If the CONTRACTOR defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provisions of the Contract, CONTRACTOR shall within seven calendar days of receipt of written notice to the CONTRACTOR from the HABITAT AUTHORITY cure the default HABITAT AUTHORITY at its sole discretion may cure the default and if CONTRACTOR fails to cure the default in such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the CONTRACTOR the cost of correcting such deficiencies. If the payments then or thereafter due the CONTRACTOR are not sufficient to cover such amount, the CONTRACTOR shall pay the difference to the HABITAT AUTHORITY.

g) If the Contract Documents, laws, ordinances, rules, or regulations of any public authority having jurisdiction require any Work to be inspected, tested, or approved, the CONTRACTOR shall give the HABITAT AUTHORITY timely notice of its readiness and schedule such inspection, testing, or approval.

h) If after the commencement of the Work the HABITAT AUTHORITY determines that any work requires special inspection, testing or approval, HABITAT AUTHORITY will instruct the CONTRACTOR to order such special inspection, testing or approval, and the CONTRACTOR shall give notice to HABITAT AUTHORITY. If such special inspection or testing reveals a failure of the Work to comply (1) with the requirements of the Contract Documents or (2) with respect to the performance of the Work, with laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, the CONTRACTOR shall bear all costs thereof, otherwise the HABITAT AUTHORITY shall bear such costs, and an appropriate Change Order shall be issued.

i) Required certificates of inspection, testing or approval shall be secured by the CONTRACTOR and promptly delivered to the HABITAT AUTHORITY.

j) Neither the observations of the HABITAT AUTHORITY and Land IQ in Administration of the Construction Contract, nor inspections, tests or approvals by persons other than the CONTRACTOR shall relieve the CONTRACTOR from obligations to perform the Work in accordance with the Contract Documents.

k) Calculation of Time. The time in which any act required or permitted by this Agreement is to be performed shall be determined by excluding the day upon which performance would otherwise be required or permitted. If such date is a Saturday, Sunday or holiday, then the time for performance shall be extended to the next day which is not a Saturday, Sunday or holiday. The term holiday shall mean all and only those State holidays specified in Sections 6700 and 7701 of the California Government Code.

l) Relationship. Nothing contained in this Agreement shall be deemed or construed by the parties or by any third person to create a relationship of principal and agent or partnership or a joint venture.

m) Entire Agreement. This Agreement shall constitute the entire understanding and agreement of the parties hereto and all prior agreements, understandings, representations or negotiations are hereby superseded, terminated and canceled in their entirety, and are of no further force or effect.

n) Severability. Nothing contained herein shall be construed as to require the commission of any act contrary to law, and wherever there is any conflict between any provision contained herein and any present or future statute, law, ordinance or regulation as to which the parties have no legal right to contract, the latter shall prevail, but the affected provisions of this Agreement shall be limited only to the extent necessary to bring them within the requirements of such law.

o) Attorney's Fees. Should any party hereto commence any action or proceeding to enforce any provision of this Agreement or for damages by reason of an alleged breach of any provision of this Agreement or for declaratory relief or specific performance, the prevailing party shall be entitled to recover from the losing party or parties such amount as the court may adjudge to be reasonable attorney's fees for services rendered and costs including costs and attorney's fees for appeal to the prevailing party in such action or proceeding.

p) Remedies. In the event of a breach the parties shall be entitled to exercise any appropriate remedy by law or in equity.

q) Captions, Number and Gender. The captions appearing at the commencement of the paragraphs, subparagraphs and sections hereof are descriptive only and for convenience in reference. Should there be any conflict between any such caption and the section, paragraph or subparagraphs at the head of which it appears the section, paragraph or subparagraph and not the caption shall control and govern the construction of this Agreement. In this Agreement, the masculine, feminine or neuter gender and the singular or plural number shall each be deemed to include the others whenever the context so requires.

r) Waiver. No waiver of any term, provision or condition of this Agreement shall be effective or enforceable unless in writing.

s) Facsimile Signatures. Facsimile signatures shall be treated as original signatures.

t) Jointly Drafted. The parties acknowledge that each has had an opportunity to consult with Counsel in the review and negotiation of this contract and no party shall be charged with responsibility for drafting it.

8) TERM

a) The Contract Term commences on the Execution Date of the Restoration Contract and terminates when the Work is completed (expected to be at the end of the 5 year maintenance period and when the project receives sign-off from the required regulatory agencies) unless otherwise terminated for cause. The restoration work commences upon the date set in the notice to proceed.

b) The date of commencement of the Work is the date established in the Notice to Proceed to be issued by HABITAT AUTHORITY.

c) The CONTRACTOR agrees to begin the Work on the date of commencement. CONTRACTOR agrees to carry the Work forward expeditiously to complete the Work according to the schedule.

d) If the CONTRACTOR is delayed at any time in the progress of the Work by any act or neglect of the HABITAT AUTHORITY, or by any separate contractor employed by the HABITAT AUTHORITY, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in transportation, unavoidable casualties or any causes beyond the CONTRACTOR's control, or by delay authorized by the HABITAT AUTHORITY pending arbitration, or by any cause which the HABITAT AUTHORITY determines may justify the delay, then the Contract Term shall be extended by Change Order for such reasonable time as the HABITAT AUTHORITY and CONTRACTOR may determine.

e) All requests for extension of time to complete the Work shall be made in writing to the HABITAT AUTHORITY as soon as it becomes known to CONTRACTOR that an extension is necessary, but no more than fifteen calendar days after the scheduled completion date of any portion of the Work. HABITAT AUTHORITY will have sole discretion to determine if a request for extension will be granted. HABITAT AUTHORITY will provide written approval or disapproval of CONTRACTOR’s request for extension. In the case of a continuing cause of delay only one timely request for extension is necessary.

9) PAYMENTS AND COMPLETION

a) The Contract Sum is the total amount payable by the HABITAT AUTHORITY to the CONTRACTOR for the performance of the Work under the Contract Documents.

b) At the time the work schedule is submitted to HABITAT AUTHORITY, the CONTRACTOR shall submit to the HABITAT AUTHORITY a cost breakdown for the various subunits of the contract. The CONTRACTOR may then submit progress payment requests based on this breakdown, indicating percentage of completion and payment due. All payment requests shall include a 10% retention based on the value of the labor and materials incorporated into the Work. At least ten days before each progress payment falls due, the CONTRACTOR shall submit to the HABITAT AUTHORITY the itemized invoice less the 10% retention supported by such date substantiating the CONTRACTOR's right to payment as HABITAT AUTHORITY may require.

c) The CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by an invoice for payment, whether incorporated in the project or not, will pass to the HABITAT AUTHORITY upon receipt of such payment by the CONTRACTOR, free and clear of all claims, liens, security interests or encumbrances, hereinafter referred to in this subsection as "liens"; and that no Work, materials or equipment covered by an invoice for payment will have been acquired by the CONTRACTOR or any other person performing the work at the site or furnishing materials and equipment for the project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the CONTRACTOR or such other person.

d) Payment shall be made to the CONTRACTOR by the HABITAT AUTHORITY in the amount of 90% of the value of the labor expended upon and materials incorporated into the Work. Said payment shall be based upon the total annual contract price and only such labor and materials therein required. Neither final payment nor the remaining retainage shall become due to the CONTRACTOR until sixty (60) calendar days following the HABITAT AUTHORITY's sign-off on the Work. In the event of a dispute between HABITAT AUTHORITY and the CONTRACTOR, HABITAT AUTHORITY may withhold from final payment an amount not to exceed 150% of the disputed amount. Final payment is subject to withholding under these General Conditions.

e) The making of final payment shall constitute a waiver of all claims by the HABITAT AUTHORITY except those arising from:

i) Unsettled liens.

ii) Faulty or defective work appearing after substantial completion.

iii) Failure of the work to comply with the requirements of the Contract Documents.

iv) Terms of any special guarantees required by the contract documents.

f) The acceptance of final payment shall constitute a waiver of all claims by the CONTRACTOR except those previously made in writing and still unsettled.

10) SAFETY PRECAUTIONS AND PROGRAMS

a) The CONTRACTOR shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work and compliance with the safety requirements set forth in Exhibit J.

b) The CONTRACTOR shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

   i) All employees hired to perform the Work and all other persons who may be affected by the performance of the Work;

   ii) All the Work and all materials and equipment to be incorporated therein, whether in storage on or off site, under the care, custody or control of the CONTRACTOR, or any of his Subcontractors or Sub-subcontractors and

   iii) Property at the site or adjacent thereto, including vegetation, trails, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

c) The CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect persons or property from damage, injury or loss. CONTRACTOR shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and barriers.

d) All damage or loss to any property referred to above caused in whole or in part by the CONTRACTOR, any Subcontractor, and Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, shall be remedied by the CONTRACTOR, except damage or loss attributable to faulty requirements in the Execution Plans or to the acts or omissions of the HABITAT AUTHORITY, and not attributable to the fault or negligence of the CONTRACTOR.

e) If any emergency threatens injury to persons or damage or loss to property during the CONTRACTOR's preparation to perform the Work, the performance of the Work, and until completion of Work, CONTRACTOR shall act to prevent the threatened damage, injury or loss. Any extension of time requested by the CONTRACTOR on account of such an emergency shall be granted by HABITAT AUTHORITY.

f) The CONTRACTOR and each Subcontractor shall evaluate, and satisfy themselves as to the conditions and limitations under which the Work is to be performed, including, without limitation, (1) location, condition, layout, and nature of the Project site and surrounding areas, (2) generally prevailing climatic conditions, (3) anticipated labor supply and costs, (4) availability and cost of materials, tools, and equipment, and (5) other similar issues. HABITAT AUTHORITY assumes no responsibility or liability for the physical condition or safety of the Project site. The CONTRACTOR shall be solely responsible for providing a safe place for the performance of the work. HABITAT AUTHORITY shall not be required to make any adjustment in either the Contract Sum or Contract Term in connection with any failure by the CONTRACTOR or any

Subcontractor to comply with the requirements of this Subparagraph, except as may be required pursuant to relocation of utilities under Government Code Section 4215.

11) CONTRACTOR'S LIABILITY INSURANCE

a) The CONTRACTOR shall purchase and maintain such insurance that will protect the CONTRACTOR and HABITAT AUTHORITY and its related parties, members, Directors, Officers, and employees from claims set forth below which may arise out of or result from the CONTRACTOR's operations under the Contract, whether such operations be by CONTRACTOR, by any Subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

b) The insurance required by Subparagraph 11.1 shall be written for: i) minimum limits coverage of the policy shall be $1,000,000 combined single limit; or ii) bodily injury $1,000,000 each person, $1,000,000 each occurrence for liability $2,000,000 annual aggregate; iii) and property damage $1,000,000 each occurrence for liability; iv) $1,000,000 Automobile Liability; v) Worker's compensation insurance as required by law; vi) Employers Liability for $1,000,000..

c) Certificates of Insurance acceptable to the HABITAT AUTHORITY shall be delivered to the HABITAT AUTHORITY prior to the Execution Date. These Certificates shall contain a provision that coverage afforded under the policies will not be canceled until at least fifteen days' prior written notice has been given to the HABITAT AUTHORITY. HABITAT AUTHORITY shall be named as an additional insured.

12) CHANGE ORDERS

a) The HABITAT AUTHORITY, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and the Contract Term being adjusted accordingly. All such changes in the Work shall be authorized by Change Order, and shall be executed under the applicable conditions of the Contract Documents.

b) A change order is a written order to the CONTRACTOR signed by the HABITAT AUTHORITY issued after the execution of the Contract, authorizing a Change in the Work or an adjustment in the Contract Sum of the Contract Term. The Contract Sum and the Contract Term may be changed only by Change Order.

c) The cost or credit to the HABITAT AUTHORITY resulting from a change in the Work shall be determined in one or more of the following ways:

   i) By mutual acceptance of a lump sum properly itemized;

   ii) By unit prices stated in the Contract Documents or subsequently agreed upon; or

   iii) By cost and a mutually acceptable fixed or percentage fee

d) If the CONTRACTOR receives a change order and upon direction from HABITAT AUTHORITY of the methods set forth above are agreed upon, the CONTRACTOR shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the HABITAT AUTHORITY on the basis of the CONTRACTOR's

reasonable expenditures and savings, including, in the case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. In such case CONTRACTOR shall keep and present, in such form as the HABITAT AUTHORITY may prescribe, an itemized accounting together with appropriate supporting data.

e) If unit prices are stated in the Contract Documents or subsequently agreed upon, and the quantities originally contemplated are changed in a proposed Change Order so that application of the agreed unit prices to the quantities of Work proposed will create a hardship on the HABITAT AUTHORITY or the CONTRACTOR, the applicable unit prices shall be equitably adjusted to prevent such hardship.

f) Should concealed conditions encountered in the performance of the Work below the surface of the ground be at variance with the conditions indicated by the Contract Documents, or should the parties discover unknown physical conditions below the surface of the ground of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract, the Contract Sum shall be equitably adjusted by Change Order upon claim by either party, made within a reasonable time, after the first observance of the conditions.

g) If the CONTRACTOR wishes to make a request for an increase in the Contract Sum or an extension in the Contract Term, CONTRACTOR shall give the HABITAT AUTHORITY written notice thereof within a reasonable time after the occurrence of the event giving rise to such request, but no more than 15 calendar days after the scheduled completion date of any portion of the work in case of a delay as set forth in Section 8.0 above. This notice shall be given by the CONTRACTOR before proceeding to execute the Work, except in an emergency endangering life or property in which case the CONTRACTOR shall proceed. No such request shall be valid unless so made. No Contract Sum or Contract Time can be changed without an authorized Change Order.

h) The HABITAT AUTHORITY shall have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Term and not inconsistent with the intent of the Contract Documents. Such changes may be effected by Field Order or by other written order. Such changes shall be binding on the HABITAT AUTHORITY and the CONTRACTOR.

i) A change in the Contract Sum or the Contract Term shall be accomplished only by written Change Order. Accordingly, no course of conduct or dealings between the parties, nor express or implied acceptance of alterations or additions to the Work, and no claim that HABITAT AUTHORITY has been unjustly enriched by any alteration or addition to the Work, whether or not there is, in fact, any unjust enrichment to the Work, shall be the basis of any claim for an increase in any amounts due under the Contract Documents or for a change in any time period provided for in the Contract Documents.

j) Agreement on any Change Order shall constitute a final settlement of all matters relating to the change in the Work that is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change, any impact such change may have on the unchanged Work, and any and all adjustments to the Contract Sum and the Work schedule. In the event a Change Order increases the Contract Sum, the CONTRACTOR shall include the Work covered by such Change Orders in invoices for payment as if such Work were originally part of the Contract Documents.

The value of the Work to be changed, added, or omitted shall be determined by the lump sum or unit prices, if any, stipulated for such work in the proposal.

13) CORRECTION OF WORK

a) The CONTRACTOR shall promptly correct all Work rejected by the HABITAT AUTHORITY as defective or as failing to conform to the Contract Documents. The CONTRACTOR shall bear all costs of correcting such rejected Work.

14) TERMINATION BY THE CONTRACTOR

a) If the Work is stopped for a period of thirty days under an order of any court or other public authority having jurisdiction, through no act or fault of the CONTRACTOR or a Subcontractor or their agents or employees or any other persons performing any of the Work under a contract with the CONTRACTOR, then the CONTRACTOR may, upon thirty calendar days written notice to the HABITAT AUTHORITY terminate the Contract and recover from the HABITAT AUTHORITY payment for all Work executed and for any proven loss sustained upon any materials, equipment, tools, construction equipment and machinery, including reasonable profit and damages.

15) TERMINATION BY THE HABITAT AUTHORITY

a) If the CONTRACTOR is adjudged a bankrupt, or the CONTRACTOR makes a general assignment for the benefit of creditors, or if a receiver is appointed on account of the CONTRACTOR's insolvency, or if the CONTRACTOR persistently or repeatedly refuses or fails (except in cases for which extension of time is provided) to supply enough properly skilled workmen or proper materials, or if the CONTRACTOR fails to make prompt payment to subcontractors for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial default a provision of the Contract Documents, then the HABITAT AUTHORITY, given that sufficient cause exists to justify such action, may, without prejudice to any right or remedy and after giving the CONTRACTOR and its surety, if any, seven calendar days written notice, terminate the employment of the CONTRACTOR, and take possession of the site and of all materials, finish the Work by whatever method deemed expedient. In such case, the CONTRACTOR shall not be entitled to receive any further payment until the Work is finished.

b) If the HABITAT AUTHORITY's cost to complete the Work exceed the unpaid balance for services satisfactorily rendered, the CONTRACTOR shall pay the difference to the HABITAT AUTHORITY and HABITAT AUTHORITY may retain the retention as necessary to cover the additional costs.

c) Without limiting any rights which HABITAT AUTHORITY may have by reason of any default by the CONTRACTOR, HABITAT AUTHORITY may suspend or terminate the Contract in whole or in part, at any time, for any other cause, convenience or any other reason and may suspend or abandon the execution of all or any part of the Work upon written notice to the CONTRACTOR. Such termination, suspension or abandonment shall be effective as of the date stated in the written notice, which shall be no less than thirty calendar days from the date of the notice. Immediately upon receipt of such notice, the CONTRACTOR shall cease performance of the Work to the extent specified

in the notice and shall incur no further costs or expenses, except as specified in the notice. At the option of HABITAT AUTHORITY, all or any of the subcontracts entered into by the CONTRACTOR prior to the date of termination shall be terminated or shall be assigned to HABITAT AUTHORITY. In the event of termination under this subparagraph, the HABITAT AUTHORITY agrees to pay the CONTRACTOR for all services satisfactorily rendered prior to the effective date of the termination and such payment shall be in full satisfaction of all services rendered hereunder.

d) HABITAT AUTHORITY agrees to also pay the CONTRACTOR fair compensation, either by purchase or rental, at the election of HABITAT AUTHORITY for any equipment of the CONTRACTOR retained by HABITAT AUTHORITY. If by rental, HABITAT AUTHORITY and the CONTRACTOR shall enter into a mutually acceptable rental agreement which shall provide that the HABITAT AUTHORITY is to maintain the equipment and return to the CONTRACTOR in good condition, ordinary wear and tear excepted, and to maintain reasonable insurance coverages on the equipment.

16) CERTIFIED PAYROLL

a) CONTRACTOR and each subcontractor shall keep accurate payroll records in compliance with Labor Code section 1776 and specifically show the name, address, social security number, work classification, straight time and overtime hours worked for each day and week, and the per diem wages paid and verified under penalty of perjury and submit to the HABITAT AUTHORITY copies of the certified payroll records for each pay period within ten calendar days from each pay period.

b) Contractor's compliance with the prevailing wage requirements set forth in the California Labor Code are subject to compliance monitoring and enforcement by the Department of Industrial Relations.

17) DISPOSAL OF WASTE

a) All waste resulting from this work shall be removed and properly disposed of by the CONTRACTOR. The CONTRACTOR agrees to pay any and all applicable charges/fees required to dispose of the waste materials. CONTRACTOR agrees to comply with Waste Discharge Requirements of the National Pollutant Discharge Elimination System (NPDES) Permit for Municipal Storm Water and Urban Runoff Discharges in the County of Los Angeles. CONTRACTOR shall use Best Management Practices "B.M.P.s" to prevent materials from entering the storm drain system and control not to pollute the air.

18) TEMPORARY SUSPENSION OF WORK

a) HABITAT AUTHORITY shall have the authority to suspend the work wholly or in part, for such a period as it may deem necessary, due to the unsuitable weather, or to such other conditions as are considered unfavorable for the suitable prosecution of the work, or for such time as it may deem convenient due to failure on the part of the CONTRACTOR to carry out orders given or to perform any provisions of the work. The CONTRACTOR agrees to immediately obey such order and shall not resume the work until so ordered in writing by HABITAT AUTHORITY.

19) PORTABLE TOILET

a) If required because of location of Work the Contactor shall provide a portable toilet with an attached hand-washing facility to assure health and hygiene for employees at the job site in accordance with relevant provisions of OSHA standards.

20) CONFERENCES AND MEETINGS

a) When and as directed by HABITAT AUTHORITY, the CONTRACTOR shall attend all conferences and meetings which HABITAT AUTHORITY or Land IQ deems necessary for the proper progress of work under this contract.

21) WORKING DAYS

a) A working day shall be limited to the hours of 7:00 a.m. to 4:00 p.m., Monday through Friday excluding holidays.

EXHIBIT F
(Standard Construction Contract)

CONTRACTOR'S STATEMENT OF NONDISCRIMINATION

1. During the performance of this Contract, the recipient, the CONTRACTOR and its subcontractors shall not deny the contract's benefits to any person on the basis of religion, color, ethnic group identification, sex, age, physical or mental disability, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, mental disability, medical condition, marital status, age or sex. The CONTRACTOR shall insure that the evaluation and treatment of employees and applicants for employment are free of such discrimination.

2. The CONTRACTOR shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et. seq.), the regulations promulgated thereunder (California Administrative Code, Title 2, Section 7285.0 et. seq.), the provisions of Article 9.5, Chapter 1, Division 3, Title 2 of the Government Code, Sections 11135-11139.5, and the regulations or standards adopted by the awarding State agency to implement such Article.

3. Recipient, The CONTRACTOR and its subcontractors agree to give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

4. The CONTRACTOR agrees to include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

STATEMENT OF COMPLIANCE

_____(Company Name), hereinafter referred to as "prospective CONTRACTOR, hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 and California Administrative Code Title 2, Division 4 Chapter 5 in matters relating to the development, implementation and maintenance of a nondiscrimination program. Prospective CONTRACTOR agrees not to unlawfully discriminate against any employee or applicants for employment because of race, religion, color, ethnic group identification, national origin, ancestry, physical handicap, mental or physical disability, medical condition, marital status, sex or age (over 40). Prospective CONTRACTOR agrees to comply with all statutes and regulations set forth in items 1 through 4 above.

I, _____(Name of Official) hereby swear that I am duly authorized to legally bind the prospective CONTRACTOR to the above certification. I am fully aware that this certification, executed on _____(Date) in the County of _____(Name of County) is made under the penalty of perjury under the laws of the State of California.

_____
Signature

_____
Title

EXHIBIT G(1)
(Standard Construction Contract)

INDEMNIFICATION AND HOLD HARMLESS AGREEMENT AND WAIVER OF SUBROGATION AND CONTRIBUTION

Contract/ Agreement/License/Permit No. or description: _____

_____

Indemnitor(s) (*list all names*):

To the fullest extent permitted by law, Indemnitor hereby agrees, at its sole cost and expense, to defend, protect, indemnify, and hold harmless the PUENTE HILLS HABITAT PRESERVATION AUTHORITY; its Related Parties, and its member entities, Board members, directors, employees, successors, and assigns (collectively "Indemnitees") from and against any and all damages, costs, expenses, liabilities, claims, demands, causes of action, proceedings, expenses, judgments, penalties, liens, and losses of any nature whatsoever, including fees of accountants, attorneys, court costs, or other professionals and all costs associated therewith (collectively "Liabilities"), arising or claimed to arise, directly or indirectly, out of, in connection with, resulting from, or related to any act, failure to act, error, or omission of Indemnitor or any of its officers, agents, servants, employees, subcontractors, materialmen, suppliers or their officers, agents, servants or employees, arising or claimed to arise, directly or indirectly, out of, in connection with, resulting from, or related to the above-referenced contract, agreement, license, or permit (the "Agreement") or the performance or failure to perform any term, provision, covenant, or condition of the Agreement, including this indemnity provision. This indemnity provision is effective regardless of any prior, concurrent, or subsequent active or passive negligence by Indemnitees and shall operate to fully indemnify Indemnitees against any such negligence. This indemnity provision shall survive the termination of the Agreement and is in addition to any other rights or remedies which Indemnitees may have under the law. Payment is not required as a condition precedent to an Indemnitee's right to recover under this indemnity provision, and an entry of judgment against an Indemnitee shall be conclusive in favor of the Indemnitee's right to recover under this indemnity provision. Indemnitor shall pay Indemnitees for any attorney’s fees and costs incurred in enforcing this indemnification provision. Notwithstanding the foregoing, nothing in this instrument shall be construed to encompass (a) Indemnitees' sole negligence or willful misconduct to the limited extent that the underlying Agreement is subject to Civil Code § 2782(a), or (b) the contracting public agency's active negligence to the limited extent that the underlying Agreement is subject to Civil Code § 2782(b). This indemnity is effective without reference to the existence or applicability of any insurance coverages which may have been required under the Agreement or any additional insured endorsements which may extend to Indemnitees. Accountants, attorneys, or other professionals employed by Indemnitor to defend Indemnitees shall be shall be selected by Indemnitees.

Indemnitor, on behalf of itself and all parties claiming under or through it, hereby waives all rights of subrogation and contribution against the Indemnitees, while acting within the scope of their duties, from all claims, losses and liabilities arising out of or incident to activities or operations performed by or on behalf of the Indemnitor regardless of any prior, concurrent, or subsequent active or passive negligence by the Indemnitees. In the event there is more than one person or entity named in the Agreement as an Indemnitor, then all obligations, liabilities, covenants and conditions under this instrument shall be joint and several.

"Indemnitor"

Name _____ Name_____

By: _____ By: _____

Its Its

EXHIBIT H (1)
(Standard Construction Contract)

CONTRACTOR'S STATEMENT OF ACKNOWLEDGEMENT TO SECURE WORKER'S COMPENSATION COVERAGE

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

I declare under penalty of perjury that the foregoing is true and correct.

Date: _____

Signature:_____

Job Title: _____

Company:_____

Project Name: _____

Project Number: _____

EXHIBIT I
(Standard Construction Contract)

STATUTORY PROVISIONS FOR
CONSTRUCTION CONTRACT CLAIMS AND PAYMENTS
[Public Contract Code §§ 20104 & 20104.50]

This contract is subject to the provisions of Article 1.5 (commencing at Section 20104) of Division 2, Part 3 of the California Public Contract Code regarding the resolution of public works claims of less than $375,000. Article 1.5 mandates certain procedures for the filing of claims and supporting documentation by the CONTRACTOR, for the response to such claims by the contracting public agency, for a mandatory meet and confer conference upon the request of the CONTRACTOR, for mandatory nonbinding mediation in the event litigation is commenced, and for mandatory judicial arbitration upon the failure to resolve the dispute through mediation. This contract hereby incorporates the provisions of Article 1.5 as though fully set forth herein.

This contract is further subject to the provisions of Article 1.7 (commencing at Section 20104 .50) of Division 2, Part 3 of the California Public Contract Code regarding prompt payment of CONTRACTOR by local governments. Article 1.7 mandates certain procedures for the payment of undisputed and properly submitted payment requests within 30 days after receipt, for the review of payment requests, for notice to the CONTRACTOR of improper payment requests, and provides for the payment of interest on progress payment requests which are not timely made in accordance with this Article. This contract hereby incorporates the provisions of Article 1.7 as though fully set forth herein. I, the undersigned CONTRACTOR, acknowledge that this contract is subject to the provisions of Section 20104 of the California Public Contract Code relating to construction contract claims and Section 20104.50 related to progress payments, and agree to be bound by all the provisions thereof as set forth in full herein.

Date _____ Signature _____

EXHIBIT J

The following are HABITAT AUTHORITY safety requirements:

a. No smoking is permitted on the Puente Hills Habitat Preservation Authority (Habitat Authority) Property or managed Property (both herein referred to as Property), nor, is any open flame.

b. Contractor shall carry a cellular telephone or two-way radio at all times on the Property and neighboring property for emergency purposes.

c. Before entering the Property from the period from May 1 through November 15 or during any other high fire hazard time, Contractor must call the Ranger Services at (310) 858-7272, extension 227, local Fire Department, or Habitat Authority office (562) 945-9003 to make sure it is safe to enter the Property, and shall not enter if the fire department prohibits or advises against it or if rangers of the Habitat Authority prohibit entrance. Rangers may contact the supervisor of the Work and order that access be limited or prohibited due to extreme fire hazard.

d. If doing work other than driving on properties for transportation purposes, such as ground work or maintenance: Contractor must carry in each vehicle one serviceable round point shovel with overall length of not less than four feet and two 2 1/2 gallon pressurized water extinguisher or two five gallon pump type water extinguisher (Note: these pump extinguishers are not pressurized – so 2 would be needed), fully equipped and ready for use. A chemical type fire extinguisher is not sufficient to satisfy this requirement. If equipment is used that has the potential to spark, Contractor must take additional fire prevention measures such as having a truck with a sizable (200 gallon) water tank on site. Other precautions and requirements suitable to weather conditions may be imposed by rangers for fire safety.

e. Contractor is required to do everything reasonably possible to prevent fires in the conduct of its activities.

f. Contractor shall immediately report any fire discovered on or around the Property to the fire department by calling 911.

g. All vehicles must be equipped with properly maintained spark arresters and catalytic converter exhaust. Vehicle exhaust systems shall be inspected daily at the start of each shift.

h. Motorized vehicles must remain on maintained roads.

i. Contractor must protect all natural water sources from pollution arising in connection with its entry onto the Property.

j. Contractor shall not disturb any vegetation on Habitat Authority owned/managed land. Appropriate mitigation will be required for disturbances.

k. No access is allowed 48 hours after a rain or longer until the trails are dry as determined by the rangers.

l. Contractor is required to do everything reasonably possible to not block emergency vehicle access on the road/trails, to not block roads/trails for other users, and to prevent fires in the conduct of their activities, including not leaving the vehicle unattended and not stopping or parking over vegetation at any time.

m. Gates shall be locked by the Contractor immediately after all ingress or egress. At no time shall the gates be left open.

n. The maximum speed limits on trails/roads is 15 miles per hour or less if conditions warrant for safety of natural resources or other trail/road users.

Contractor shall cause all subcontractors to comply with these owner-specified safety requirements.

6. Data To Be Furnished. Dates of expected Work to take place and name of Contractor (and if Contractor is using an unmarked car, vehicle license plate numbers) must be furnished to rangers the day prior by calling Ranger Services (Kenn Hughes) (310) 858-7272, extension 227.

ATTACHMENT 1

NONCOLLUSION DECLARATION TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

The undersigned declares:
I am the _____ of _____(company), the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.
Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.
I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____[date], at _____[city], ___.

_____
SIGNATURE

ATTACHMENT 2
Bid Sheets

38.68 Acres Purple Sage Scrub Habitat Restoration

BID SHEET

DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL
Project Signage/Protective Fencing	LF			
Site Preparation Clearing	AC			
Pumps, Booster Pumps	LS			
Pumps, Booster Pumps– Alternate Irrigation System[1]	LS			
Mainline Irrigation and Installation	LF			
Temporary Irrigation System and Installation	AC			
Alternate Temporary Irrigation System and Installation[2]	AC			
Irrigated Grow-and-Kill - Year 1	AC			
Irrigated Grow-and-Kill - Year 2	AC			
Alternate non-irrigated Grow-and-Kill Year 1[3]	AC			
Alternate non-irrigated Grow-and-Kill Year 2	AC			
Arbuscular mycorrhizal inoculum to be added to the hydroseed mix	EA			
Fertilizer packet – Container Plants	EA			
Container Plant Costs[4]	EA			
Two Step Hydroseeding	AC			
Container Plant Installation	EA			
120-day Plant Establishment Period (PEP)	AC			
Maintenance – Year 1	AC			
Maintenance – Year 2	AC			
Maintenance – Year 3	AC			
Maintenance – Year 4	AC			
Maintenance – Year 5	AC			
Temporary Irrigation Removal	LS			

[1] Alternate pump, booster pump for alternate temporary irrigation system and non-irrigated grow-and-kill if drought conditions persist and water supply is restricted by local or state regulations.

[2] Alternate temporary irrigation system if drought conditions persist and water supply is restricted by local or state regulations.

[3] If drought conditions persist and water supply is restricted by local or state regulations, alternate grow-and-kill shall rely on natural rainfall.

[4] Shall include cost of arbuscular mycorrhizal inoculum for inoculation of container plants.

38.68 Acres Purple Sage Scrub Habitat Restoration

TOTAL BASE BID	
TOTAL ALTERNATE BID[5]	

AC = acre
EA = each item
LF = linear foot
LS = lump sum

[5] Total Alternate Bid includes alternate pump, alternate irrigation system, and non-irrigated grow-and-kill program if drought conditions persist and water supply is restricted by local or state regulations.

14.32 Acres Sagebrush Scrub Habitat Restoration

BID SHEET

DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL
Project Signage/Protective Fencing	LF			
Site Preparation Clearing	AC			
Pumps, Booster Pumps	LS			
Pumps, Booster Pumps– Alternate Irrigation System[1]	LS			
Mainline Irrigation and Installation	LF			
Temporary Irrigation System and Installation	AC			
Alternate Temporary Irrigation System and Installation[2]	AC			
Irrigated Grow-and-Kill - Year 1	AC			
Irrigated Grow-and-Kill - Year 2	AC			
Alternate non-irrigated Grow-and-Kill Year 1[3]	AC			
Alternate non-irrigated Grow-and-Kill Year 2	AC			
Arbuscular mycorrhizal inoculum to be added to the hydroseed mix	EA			
Fertilizer packet – Container Plants	EA			
Container Plant Costs[4]	EA			
Two Step Hydroseeding	AC			
Container Plant Installation	EA			
120-day Plant Establishment Period (PEP)	AC			
Maintenance – Year 1	AC			
Maintenance – Year 2	AC			
Maintenance – Year 3	AC			
Maintenance – Year 4	AC			
Maintenance – Year 5	AC			
Temporary Irrigation Removal	LS			
			TOTAL BASE BID	

[1] Alternate pump, booster pump for alternate temporary irrigation system and non-irrigated grow-and-kill if drought conditions persist and water supply is restricted by local or state regulations.

[2] Alternate temporary irrigation system if drought conditions persist and water supply is restricted by local or state regulations.

[3] If drought conditions persist and water supply is restricted by local or state regulations, alternate grow-and-kill shall rely on natural rainfall.

[4] Shall include cost of arbuscular mycorrhizal inoculum for inoculation of container plants.

14.32 Acres Sagebrush Scrub Habitat Restoration

TOTAL ALTERNATE BID[5]	

AC = acre
EA = each item
LF = linear foot
LS = lump sum

[5] Total Alternate Bid includes alternate pump, booster pump, alternate irrigation system, and non-irrigated grow-and-kill program if drought conditions persist and water supply is restricted by local or state regulations.

3.5 Acres Oak Woodland Habitat Restoration

BID SHEET

DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL
Project Signage/Protective Fencing	LF			
Site Preparation Clearing	AC			
Pumps, Booster Pumps	LS			
Pumps, Booster Pumps– Alternate Irrigation System[1]	LS			
Mainline Irrigation and Installation	LF			
Temporary Irrigation System and Installation	AC			
Temporary Bubbler Irrigation System and Installation (1-gallon walnut and oak container plants)	AC			
Alternate Temporary Irrigation System and Installation[2]	AC			
Installation of Oak Container Plants[3]	EA			
Maintenance Irrigation Oak Container Plants (Site Prep Year 1)	AC			
Maintenance Irrigation Oak Container Plants (Site Prep Year 2)	AC			
Irrigated Grow-and-Kill - Year 1	AC			
Irrigated Grow-and-Kill - Year 2	AC			
Alternate non-irrigated Grow-and-Kill Year 1[4]	AC			
Alternate non-irrigated Grow-and-Kill Year 2	AC			
Arbuscular mycorrhizal inoculum to be added to the hydroseed mix	EA			
Fertilizer packet – Container Plants	EA			
Container Plant Costs[5,6]	EA			
Root Guards (Oaks and Walnuts Only)	EA			
Two Step Hydroseeding	AC			
Container Plant Installation	EA			

[1] Alternate pump, booster pump for alternate temporary irrigation system and non-irrigated grow-and-kill if drought conditions persist and water supply is restricted by local or state regulations.
[2] Alternate temporary irrigation system if drought conditions persist and water supply is restricted by local or state regulations.
[3] Installation of oak container plants will occur following initial site preparation clearing.
[4] If drought conditions persist and water supply is restricted by local or state regulations, alternate grow-and-kill shall rely on natural rainfall.
[5] Cost of oak container plant propagation to be installed following initial site preparation clearing not to be included in container plant cost.
[6] Shall include cost of arbuscular mycorrhizal inoculum for inoculation of container plants.

3.5 Acres Oak Woodland Habitat Restoration

120-day Plant Establishment Period (PEP)	AC			
Maintenance – Year 1	AC			
Maintenance – Year 2	AC			
Maintenance – Year 3	AC			
Maintenance – Year 4	AC			
Maintenance – Year 5	AC			
Temporary Irrigation Removal	LS			
			TOTAL BASE BID	
			TOTAL ALTERNATE BID[7]	

AC = acre
EA = each item
LF = linear foot
LS = lump sum

[7] Total Alternate Bid includes alternate pump, booster pump, alternate irrigation system, and non-irrigated grow-and-kill program if drought conditions persist and water supply is restricted by local or state regulations.

3.5 Acres Walnut Woodland Habitat Restoration

BID SHEET

DESCRIPTION	UNIT	UNIT COST	QUANTITY	TOTAL
Project Signage/Protective Fencing	LF			
Site Preparation Clearing	AC			
Pumps, Booster Pumps	LS			
Pumps, Booster Pumps – Alternate Irrigation System[1]	LS			
Mainline Irrigation and Installation	LF			
Temporary Overhead Irrigation System and Installation	AC			
Temporary Bubbler Irrigation System and Installation (1-gallon walnut and oak container plants)	AC			
Alternate Temporary Irrigation System and Installation[2]	AC			
Installation of Oak Container Plants[3]	EA			
Maintenance Irrigation Oak Container Plants (Site Prep Year 1)	AC			
Maintenance Irrigation Oak Container Plants (Site Prep Year 2)	AC			
Irrigated Grow-and-Kill - Year 1	AC			
Irrigated Grow-and-Kill - Year 2	AC			
Alternate non-irrigated Grow-and-Kill Year 1[4]	AC			
Alternate non-irrigated Grow-and-Kill Year 2	AC			
Arbuscular mycorrhizal inoculum to be added to the hydroseed mix	EA			
Fertilizer packet – Container Plants	EA			
Container Plant Costs[5,6]	EA			
Root Guards (Oaks and Walnuts Only)	EA			
Two Step Hydroseeding	AC			

[1] Alternate pump, booster pump for alternate temporary irrigation system and non-irrigated grow-and-kill if drought conditions persist and water supply is restricted by local or state regulations.

[2] Alternate temporary irrigation system if drought conditions persist and water supply is restricted by local or state regulations.

[3] Installation of oak container plants will occur following initial site preparation clearing in restoration area PH7 only.

[4] If drought conditions persist and water supply is restricted by local or state regulations, alternate grow-and-kill shall rely on natural rainfall.

[5] Cost of oak container plant propagation to be installed in restoration area PH7 following initial site preparation clearing not to be included in container plant cost.

[6] Shall include cost of arbuscular mycorrhizal inoculum for inoculation of container plants.

3.5 Acres Walnut Woodland Habitat Restoration

Container Plant Installation	EA			
120-day Plant Establishment Period (PEP)	AC			
Maintenance – Year 1	AC			
Maintenance – Year 2	AC			
Maintenance – Year 3	AC			
Maintenance – Year 4	AC			
Maintenance – Year 5	AC			
Temporary Irrigation Removal	LS			
			TOTAL BASE BID	
			TOTAL ALTERNATE BID[7]	

AC = acre
EA = each item
LF = linear foot
LS = lump sum

[7] Total Alternate Bid includes alternate pump, booster pump, alternate irrigation system, and non-irrigated grow-and-kill program if drought conditions persist and water supply is restricted by local or state regulations.