



DENISE DUFFY & ASSOCIATES, INC.

PLANNING AND ENVIRONMENTAL CONSULTING

Date: July 11, 2024

To: Megan Rooney
California Department of Fish and Wildlife

Cc: Jake Smith
Monterey Peninsula Regional Park District

From: Josh Harwayne
Denise Duffy & Associates, Inc.

RE: Addendum to the Project Specific Analysis/Addendum for the Garland Ranch Regional Park Fuel Management Project

This Addendum to the Garland Ranch Regional Park (Park) Fuel Management Project (project) Project Specific Analysis/Addendum (PSA), prepared in compliance with the California Vegetation Treatment Program (CalVTP) Program Environmental Impact Report (PEIR), incorporates additional mitigation to reduce impacts to Crotch's bumble bee (CBB; *Bombus crotchii*) and western bumble bee (WBB; *Bombus occidentalis*) to a less-than-significant level. The Project and PSA were approved by the Monterey Peninsula Regional Park District (MPRPD) on October 4, 2023, and a Notice of Determination was filled on October 10, 2023. A detailed project description is provided in the PSA. In summary, the project consists of the removal or thinning of three invasive blue gum Eucalyptus (*Eucalyptus globulus*) stands to promote the resilience and recovery of native habitats and species within the Park and to reduce wildfire risk in the area.

The purpose of this Addendum is to incorporate additional mitigation specific to CBB and WBB, both of which are candidate species proposed for listing under the California Endangered Species Act¹. The PSA determined, in accordance with the PEIR, that although proposed mitigation measures would reduce impacts to foraging special-status bumble bees and their floral resources, significant impacts could still occur to special-status bumble bee species. A Statement of Overriding Considerations was included in the PSA for these species. However, as outlined below, MPRPD has coordinated closely with CDFW to identify additional mitigation that includes the preparation of a Mitigation Plan and the acquisition of take authorization for CBB and WBB via a Restoration Management Permit (RMP) prior to the initiation of construction. The incorporation of this additional mitigation via adoption of this Addendum by MPRPD would reduce any potentially significant impacts to bumble bees to a less-than-significant level.

As outlined in the PSA, no grading or development is proposed within annual grassland habitat. Therefore, no permanent impacts to potential CBB and/or WBB nesting and foraging habitat would occur and habitat function for these species would be maintained and improved by removing non-native, invasive tree

¹ Detailed information on the life history, local and regional occurrences, and suitable habitat present within the project site for special-status bumble bee species can be found in the project *Biological Resources Report* (DD&A, 2023).

species. The removal of invasive tree species from the project site is anticipated to result in the natural recruitment of a variety of native plant species, which would provide higher quality foraging habitat for special-status bumble bee species, including CBB and WBB. In coordination with CDFW, a Non-Native Tree Removal Mitigation Plan (Mitigation Plan) is added to the PSA via this Addendum to mitigate the removal of approximately 150 mature non-native trees from within riparian habitat (Attachment A). The Mitigation Plan requires planting 100 native riparian tree species as well as a census of naturally recruited riparian species to ensure the successful mitigation of riparian habitat impacts and promote habitat for CBB and WBB.

The mitigation presented in the PSA is intended to avoid or reduce impacts to CBB and WBB and their habitat and ensure that habitat is enhanced and restored. Although WBB and CBB may be temporarily impacted during implementation of the project, the project is intended to reduce the occurrence of high-intensity wildfire and provide space and conditions to promote the establishment and expansion of native plant species which would beneficially decrease an existing threat to special-status bumble bees and restore their habitat.

MPPRD is in coordination with CDFW to obtain an RMP to authorize the take of CBB and WBB for the project prior to project initiation. The RMP will include additional mitigation measures to further avoid impacts to CBB and WBB during project implementation, including measures to further reduce impacts which may occur during the flight season. This additional mitigation reduces potentially significant impacts which could occur during the bumble bee flight season to a less-than-significant level.

The project has been designed to reduce impacts to CBB and WBB and the implementation of the project is intended to reduce the threat of wildfire and improve habitat conditions for these species. Additionally, the incorporation of additional mitigation via this Addendum, including the attached Mitigation Plan and the acquisition of take authorization for these species via an RMP, reduces potentially significant impacts to CBB and WBB to a less-than-significant level.

REFERENCES

Denise Duffy & Associates, Inc. (DD&A). 2023. Garland Ranch Regional Park Fuel Management Project Biological Resources Report. Prepared for Monterey Peninsula Regional Parks District.

Non-Native Tree Removal Mitigation Plan

Garland Ranch Regional Park Fuel Management Project



June 2024

Prepared for:

Monterey Peninsula Regional Park District
4860 Carmel Valley Rd
Carmel-By-The-Sea, CA 93923

Prepared By:



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Attachment A

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1 Introduction

This Non-Native Tree Removal Mitigation Plan (Plan) provides methodology to mitigate the removal of approximately 150 trees from within riparian habitat for the Garland Ranch Regional Park (Park) Fuel Management Project (project) located in Carmel Valley, California. In summary, the project includes the removal or thinning of three invasive blue gum Eucalyptus (*Eucalyptus globulus*) stands to promote the resilience and recovery of native habitats and species within the Park and to reduce wildfire risk in the area. The three project treatment areas – the Main Stand, the Southeast Stand, and the Northeast Stand – encompass approximately 11.7 acres of the approximately 3,670-acre Park. This Plan focuses on planting native riparian tree species within the approximately 5.26 acres of riparian habitat within the Main Stand and Northeast Stand.

The implementation of the project is intended to increase the habitat value of the existing riparian corridor by removing invasive species and reducing the risk of high intensity wildfire. This Plan is intended to mitigate the loss of the low-quality habitat that the non-native trees currently provide for wildlife species including nesting birds and monarch butterflies. Additionally, the removal of invasive species from the project site is anticipated to result in the natural recruitment of a variety of native plant species, which would provide higher quality foraging habitat for special-status bumble bee species, including Crotch's bumble bee (*Bombus crotchii*) and western bumble bee (*Bombus occidentalis*), as these species require a variety of flowering plants to provide nectar throughout their life cycle.

Denise Duffy & Associates, Inc. (DD&A) has prepared this Plan to address installation of appropriate tree species and a monitoring schedule to monitor natural recruitment of native species. Site-specific implementation measures are provided in a narrative format and include a definition of target species, plant community, and location of areas to be planted; a native tree species planting palette; planting specifications; tree establishment maintenance; success criteria; monitoring/reporting requirements; and adaptive management measures.

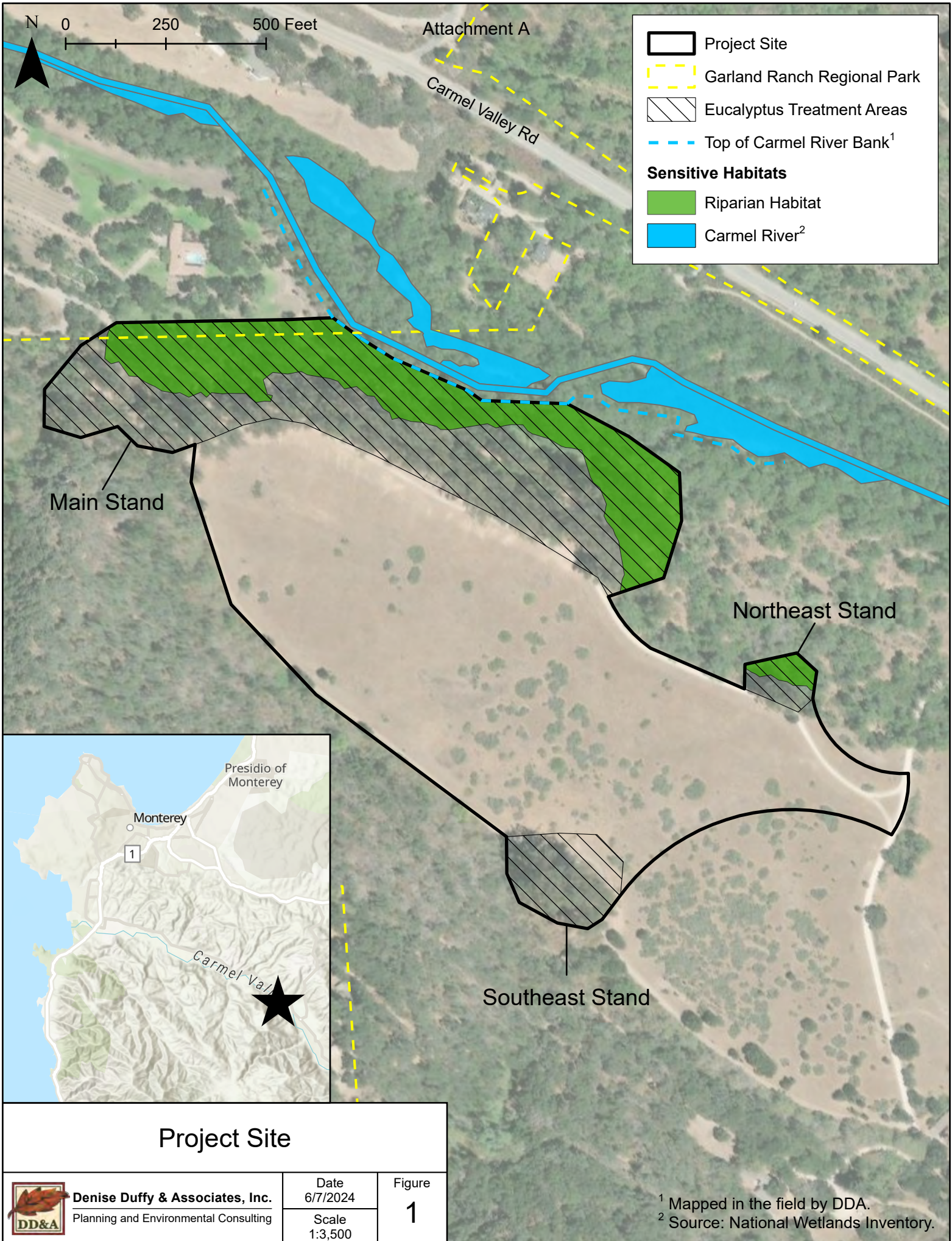
1.1 Site Location

The project site is located directly south of the Carmel River on assessor parcel numbers (APN) 416-511-005-000 and 416-027-025-000 (**Figure 1**). The project site is located in the northeastern corner of the Park approximately 0.1-mile (500 feet) south of Carmel Valley Road.

1.2 Environmental Setting

Topography and Soils

The project site lies on a historic river terrace south of the Carmel River. According to the FEMA Flood Insurance Rate Map (FEMA, 2024), the project site lies partially within the 100-year floodplain. Soil mapping units include the following: Fluvents consisting of cobbly sand to sandy loam; Tujunga fine sand consisting of sandy alluvium; and San Andreas fine sandy loam and Junipero-Sur complex consisting of coarse loamy soils (USDA-NRCS, 2024).



Vegetation

Vegetation types within the project site include Eucalyptus grove, riparian forest, and annual grassland; however, this Plan focuses on riparian habitat. Riparian habitat within the treatment areas consists of a moderate to closed canopy of blue gum Eucalyptus, with a mid-canopy of arroyo willow (*Salix lasiolepis*), black cottonwood (*Populus trichocarpa*), and California buckeye (*Aesculus californica*). Understory vegetation includes a moderately dense shrub layer dominated by poison oak (*Toxicodendron diversilobum*), common snowberry (*Symphoricarpos albus*), California blackberry (*Rubus ursinus*), and coffeeberry (*Frangula californica*). Dominant herbaceous vegetation consists of California mugwort (*Artemisia douglasiana*), beardless wild rye (*Elymus triticoides*), Santa Barbara sedge (*Carex barbarae*), hedge nettle (*Stachys bullata*), and blue wild rye (*Elymus glaucus*).

1.3 Mitigation Requirements

This Plan is being prepared at the request of the California Department of Fish and Wildlife (CDFW), as a component of the project's Lake and Streambed Alteration Agreement (LSAA) and Restoration Management Permit (RMP) applications. While CDFW recognizes that riparian habitat within the project site will likely benefit from the removal of non-native Eucalyptus, the removal of approximately 150 mature trees from riparian habitat will result in loss of low-quality habitat for wildlife species including nesting birds. Therefore, CDFW requested a Mitigation Plan outlining mitigation for this loss of habitat, including the species, density, number, method of planting, and source of plant materials for the proposed mitigation approach.

1.4 Responsible Party and Implementation

All elements of restoration detailed herein will be funded by:

Monterey Peninsula Regional Parks District (MPRPD)
4860 Carmel Valley Rd
Carmel-By-The-Sea, CA 93923

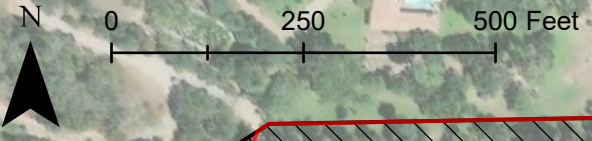
MPRPD shall fund and retain a qualified habitat restoration contractor and biological consultant to properly implement mitigation, perform monitoring, and prepare annual monitoring reports.




2 Implementation Plan

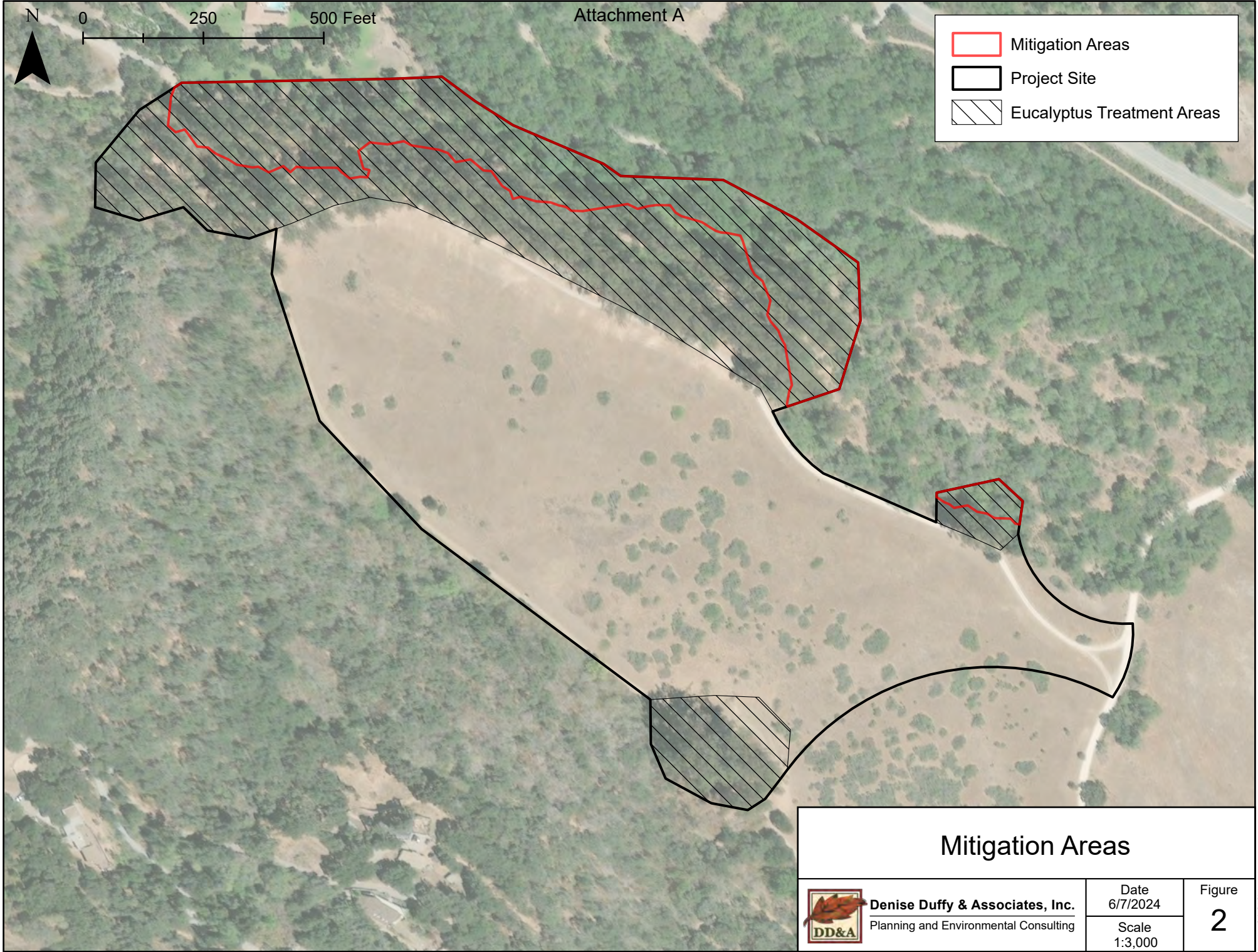
The following subsections detail materials and methods required to mitigate the loss of habitat resulting from the removal of approximately 150 Eucalyptus trees from within riparian habitat. The methods for removal of Eucalyptus trees are not included in this Plan; however, a detailed description of the Project, including tree removal and other maintenance activities, is provided in the *Garland Ranch Regional Park Fuel Management Project Biological Resources Report* (DD&A, 2023). As described below, this Plan intends to monitor the natural recruitment of native species, as well as propose planting to supplement natural colonization of native vegetation within the mitigation areas (**Figure 2**).

2.1 Planting Plan

Following completion of tree removal, the mitigation areas shall be planted with the specified palette of native tree species as detailed in the following subsections.



	Mitigation Areas
	Project Site
	Eucalyptus Treatment Areas



<h2>Mitigation Areas</h2>		
	Denise Duffy & Associates, Inc. Planning and Environmental Consulting	Date 6/7/2024
		Scale 1:3,000
		Figure 2

2.1.1 Native Seed Collection & Plant Propagation

Seed and propagule collection must be initiated over the course of the year prior to planting. Seeds will be stored properly in a cool and dry location and delivered to a native plant nursery for propagation. The native plant nursery shall adhere to best management practices for the reduction of plant and soil-borne pests and pathogens, including but not limited to *Phytophthora*.

2.1.2 Native Plant Species List

The plant palette consists of native tree species that are representative of existing riparian habitat within and adjacent to the treatment areas. The native tree species to be installed within the restoration areas (**Table 1**) are informed by a review of site conditions by DD&A during June 2024. Depending on availability and propagation success or the extent of remnant native vegetation that will recolonize the site from existing root systems, the species list may be modified by removal of certain species and/or addition of other appropriate native tree species found in adjacent habitat. The tree species and quantities specified in **Table 1** shall be planted to mitigate the loss of low-quality tree canopy and habitat resulting from blue gum Eucalyptus removal.

Table 1 - Native Plant Container Stock

Botanical Name	Common Name	Quantity
TREES		
<i>Aesculus californica</i>	California buckeye	20
<i>Populus trichocarpa</i>	Black cottonwood	30
<i>Salix lasiolepis</i>	Arroyo willow	50
Total Trees		100

2.1.3 Planting Methods

Planting shall occur during the cool season after several winter rain events have moistened the soil to a depth of at least six inches and shorter photoperiods and cooler daily temperatures reduce the stress on new plants (typically November – February). When feasible, planting will be scheduled during periods of cool weather when precipitation is forecasted. Installing container stock during the winter when soil is moist maximizes the odds of success, especially in the absence of an irrigation system.

Following the determination of plant layout by the restoration practitioner, plants will be installed by hand digging a planting pit, carefully extracting the plant from the container with minimal root disturbance, placing the plant so it is sitting vertically in the hole and backfilling and compressing the native soil around the plant by hand. Care should be exercised to not break off or bend the root ball during planting. All plantings shall be watered in by hand at the time of planting.

Willow and Cottonwood Dormant Cutting Planting

Dormant cuttings of willow and cottonwood shall be collected from the surrounding area and installed within existing riparian woodland habitat within the mitigation areas. Dormant cuttings shall consist of healthy willow and cottonwood branches that are between approximately 3/4 and

2 inches in diameter with side branches removed. No more than 10 percent of any tree canopy shall be removed during collection of dormant cuttings. Dormant cuttings may be stored in water for up to three days prior to planting to encourage initial formation of adventitious roots. Dormant cuttings shall be planted within a pilot hole created by a metal bar or similar implement to a minimum depth of two feet with approximately 2/3 of the cutting buried below ground. The air space around the cutting shall be filled with soil through a combination of tamping and application of water.

3 Maintenance

Following completion of the initial restoration activities described above, the maintenance period will commence and will continue for a period of three years. Maintenance of the restoration area will consist of annual inspections, removal of invasive non-native weeds, application of supplemental watering if necessary, and replanting if necessary. Maintenance inspections shall be performed on an annual basis and will identify areas where focused work is required.

4 Monitoring and Reporting Plan

4.1 Success Criteria

The goal of restoration is to promote recruitment of healthy, native tree species and vegetation following removal of invasive non-native species from the existing riparian corridor and mitigate the loss of tree canopy habitat. Final Year 3 criteria necessary to confirm project success are provided below. Progress towards meeting final success criteria shall be evaluated throughout the duration of the monitoring and reporting program.

Goal 1: Mitigate for the loss of trees in-kind at a ½:1 ratio.

Objective 1: Install native tree plantings to mitigate for non-native trees removed from the riparian corridor.

Success Criteria 1: Confirm, via monitoring, that tree installation is conducted according to this Plan.

Objective 2: Document survival of the required number of mitigation trees at the end of the monitoring period.

Success Criteria 2: Confirm that at least 75 mitigation trees are surviving and healthy at the end of the monitoring period.

4.2 Monitoring Schedule

It is expected that initial planting will be completed during mid-winter to early spring with the first annual spring monitoring event to occur one calendar year later. Monitoring and reporting will occur for a period of three years or until final success criteria are met. Annual monitoring events consisting of native riparian tree species census will occur during the spring when target tree species stage of growth and are identifiable to species.

4.2.1 Mitigation Tree Survival

The number of surviving mitigation tree plantings will be assessed once each year in the fall by a census to verify that the minimum number of trees required for mitigation are surviving and healthy. Each tree will be individually counted and assessed for vigor in the field in accordance with the International Society of Arboriculture (ISA) classes of low, normal, or high:

- Low – tree is weak, growing slowly, and/or under stress.
- Normal – tree has average vigor for its species and the site conditions.
- High – tree is growing well and appears to be free of significant health stress factors.

Naturally recruited native riparian tree species will be included in the census and mapped. As described above, the removal of non-native species from the riparian corridor is expected to result in natural recruitment of a variety of native plant species, which would increase the habitat value for special-status bumble bee species including Crotch's bumble bee and western bumble bee.

4.2.2 Adaptive Management

Remedial adaptive management measures may be initiated if after the second year of monitoring the progress of the mitigation plantings does not appear to be on track to meet final success criteria. Adaptive management can be defined as a structured, iterative approach to decision making in a changing or uncertain environment. An adaptive management strategy allows informed adjustments to the mitigation strategy that are based on monitoring data and observations in order to increase the potential to achieve final success criteria. Examples of remedial action may include but are not limited to replanting to correct deficient survival rates, modifying the native tree palette, modifying the irrigation approach, adding or changing browse protection measures, modifying or increasing the intensity of weed control efforts and/or installing devices to control erosion.

4.3 Reporting

Annual monitoring reports shall be based on field observations as described in this section. A total of three annual monitoring reports shall be submitted to MPRPD and CDFW. The monitoring reports shall include, but not be limited to, the following information:

- The results of the data collection from annual spring tree census, including results from previous monitoring years;
- Dates and descriptions of all maintenance activities conducted during the reporting period and the entire monitoring period, including but not limited to the amount and frequency of weed control;
- Description of the general health and vigor of the mitigation plantings;
- Description of any pests or circumstances substantially affecting the mitigation plantings;
- Description of any changes in the physical environment since the end of the previous reporting period and since the beginning of the monitoring period; and
- Recommendations for further maintenance and management that may be necessary for maintaining the success criteria in this Plan.

Recommendations made in each monitoring report shall be carried out in a timely manner. Follow-up of maintenance and management shall be documented and summarized in subsequent monitoring reports. A final report shall be submitted to MPRPD and CDFW at the end of the monitoring period and shall include a cumulative analysis, summary of the data collected

throughout the duration of the monitoring period, and a definitive statement as to the success of the mitigation based on the success criteria.

If it is determined that the mitigation planting has not been successful at the third year of monitoring, a supplemental report shall be prepared that identifies the causes of failure and suggests measures that will achieve success, and the monitoring period shall be extended one year. At the end of this extended period, an additional report shall be prepared as described above. This report shall satisfy the same criteria as outlined above for the final report. If at the end of the extended monitoring period the report indicates the success criteria have not been met, the monitoring shall be extended again, and the process repeated until success is achieved.

5 References

Cal-IPC. 2024. California invasive plant inventory. California Invasive Plant Council: Berkeley, California. Available at: <https://www.cal-ipc.org/plants/inventory/>

Denise Duffy and Associates, Inc. (DD&A). 2023. Garland Ranch Regional Park Fuel Management Project Biological Resources Report. Prepared for Monterey Peninsula Regional Park District.

Federal Emergency Management Agency (FEMA). 2024. National Flood Hazard Layer. Available at: <https://msc.fema.gov/portal/home>

U.S. Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS). 2024. Web Soil Survey. Available online at: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>