The logo for SWCA (San Luis Obispo County Water Conservation Agency) is displayed vertically on the left side of the page. It consists of the letters 'S', 'W', 'C', and 'A' stacked vertically in a large, light blue, serif font.

North Section of the Bob Jones Trail: Octagon Barn to Cloverridge Lane Habitat Mitigation and Monitoring Plan

REVISED SEPTEMBER 2025

PREPARED FOR

**County of San Luis Obispo
Public Works**

PREPARED BY

SWCA Environmental Consultants

**NORTH SECTION OF THE BOB JONES TRAIL: OCTAGON
BARN TO CLOVERRIDGE LANE
HABITAT MITIGATION AND MONITORING PLAN**

Prepared for

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SWCA Project No. 93691

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1 INTRODUCTION

This Habitat Mitigation and Monitoring Plan (HMMP) has been prepared by SWCA Environmental Consultants (SWCA) to describe the proposed methods for mitigating project impacts to riparian habitats associated with the North Section of the Bob Jones Trail (project), located between the Octagon Barn and Cloverridge Lane in San Luis Obispo, California. The project runs from the Octagon Barn, south of the City of San Luis Obispo, south to the southern paved limits of Cloverridge Lane within the County of San Luis Obispo's (County) right-of-way. Although a conceptual HMMP has been prepared for a longer alignment, currently the County is proposing to construct only the north section of trail described herein so the HMMP is focused on this section only. The south section from the end of Cloverridge Lane to the Ontario Road Staging Area will be permitted and constructed later and therefore is not included within this HMMP.

The project is anticipated to result in temporary impacts to U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) jurisdiction in San Luis Obispo Creek, and permanent and temporary impacts to California Department of Fish and Wildlife (CDFW) jurisdictions in San Luis Obispo Creek. This HMMP is intended to assist the project team in preparing agency permit applications and has been prepared as required by the Final Environmental Impact Report (FEIR) (PMC 2015 State Clearinghouse #2010031121). The HMMP incorporates guidelines presented in the *Final 2015 Regional Compensatory Mitigation and Monitoring Guidelines for South Pacific Division USACE* (USACE 2015) and the *Final Rule for Compensatory Mitigation for Losses of Aquatic Resources* (USACE and U.S. Environmental Protection Agency [EPA] 2008).

The previously prepared Bob Jones Pathway – San Luis Obispo to Ontario Road Natural Environment Study (NES; SWCA 2013), NES Addendum (SWCA 2016), Environmental Impact Report (EIR), Aquatic Resources Report (ARR), Spring 2023 Biological Survey Results, and their associated appendices fully describe the scope and impacts of the proposed project.

Proposed mitigation for permanent impacts to jurisdictional waters will be implemented at one location adjacent to the East Fork of San Luis Obispo (SLO) Creek adjacent to the project area. Areas temporarily disturbed by the project will be stabilized and restored following completion of the work. The purpose of this plan is to describe proposed mitigation for unavoidable impacts and provide methods and timing for implementation, extent of restoration efforts adjacent to the East Fork of SLO Creek, and performance criteria and monitoring protocol.

2 PROJECT AND SITE DESCRIPTION

2.1 Responsible Parties and Financial Assurances

Applicant/Permittee: County of San Luis Obispo
Department of Public Works
1055 Monterey Street
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Contact: Aaron Yonker

Preparer of Mitigation Plan: SWCA Environmental Consultants
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Contact: Sara Snyder

Mitigation Implementation West Argano: The Land Conservancy of San Luis Obispo County
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San Luis Obispo, CA 93401
(805) 544-9096
Contact: Jon Hall

The applicant, the County of San Luis Obispo (County), has included sufficient funding in the overall project budget to implement the Final HMMP and any required contingency actions.

2.2 Project Location

The project is located within the Pismo Beach USGS 7.5-minute topographic quadrangle, south of the City of San Luis Obispo and northeast of Avila Beach. The north section of the project area roughly parallels San Luis Obispo Creek (SLO Creek) and U.S. Highway 101 (US 101), east of the Irish Hills, in central San Luis Obispo County at an elevation of approximately 50 to 150 feet (15 to 46 meters). The surrounding area consists of developed roadways, agricultural fields, conservation lands, and rural residences (refer to Figures 1 – 3).

2.3 Project Description

The north section of the new trail would begin at the Octagon Barn on South Higuera Street. From the Octagon Barn, a Class I path would proceed southwest along the east side of South Higuera Street. After crossing the intersection of Buckley Road with South Higuera Street, the path would continue to run along the south/east side of South Higuera Street before reaching the proposed South Higuera Bridge (Project 1 – Bridge A) which would allow the pathway to cross over SLO Creek near the City of San Luis Obispo Filipponi Ecological Reserve.

After crossing SLO Creek at the proposed South Higuera Bridge, the trail would proceed between the east edge of South Higuera Street and the SLO Creek corridor at or near top of bank. Along a portion of South Higuera Street and the US 101 northbound off-ramp, a 573-foot long by approximately 9.75-foot-high retaining wall will be built to support the trail up to the intersection of the US 101 northbound off-ramp and Clovridge Lane. The trail would then cross under Clovridge Lane by way of a new bike/pedestrian tunnel that would be constructed under the roadway. The trail would then continue until the southern end of Clovridge Lane (Figure 2).

Construction of the trail would occur within a narrow 30 to 60-foot (ft) (9 to 18-meters [m]) wide construction disturbance zone on nearly level terrain. In some areas, the construction disturbance zone would be wider, up to 140 feet (43 m) wide, to include adjacent staging areas. All staging areas are temporary unless otherwise described, but all located outside of waters of the United States (WoUS). In several areas the trail would run parallel to and within 30 ft (9 m) of the banks of SLO Creek and its riparian corridor, requiring some tree trimming and removal of riparian trees to construct the trail; however, all proposed encroachment and tree removal would occur outside of WoUS. Access will be along public and private roads and along California Department of Transportation (Caltrans) ROW.



Figure 1. Project Vicinity

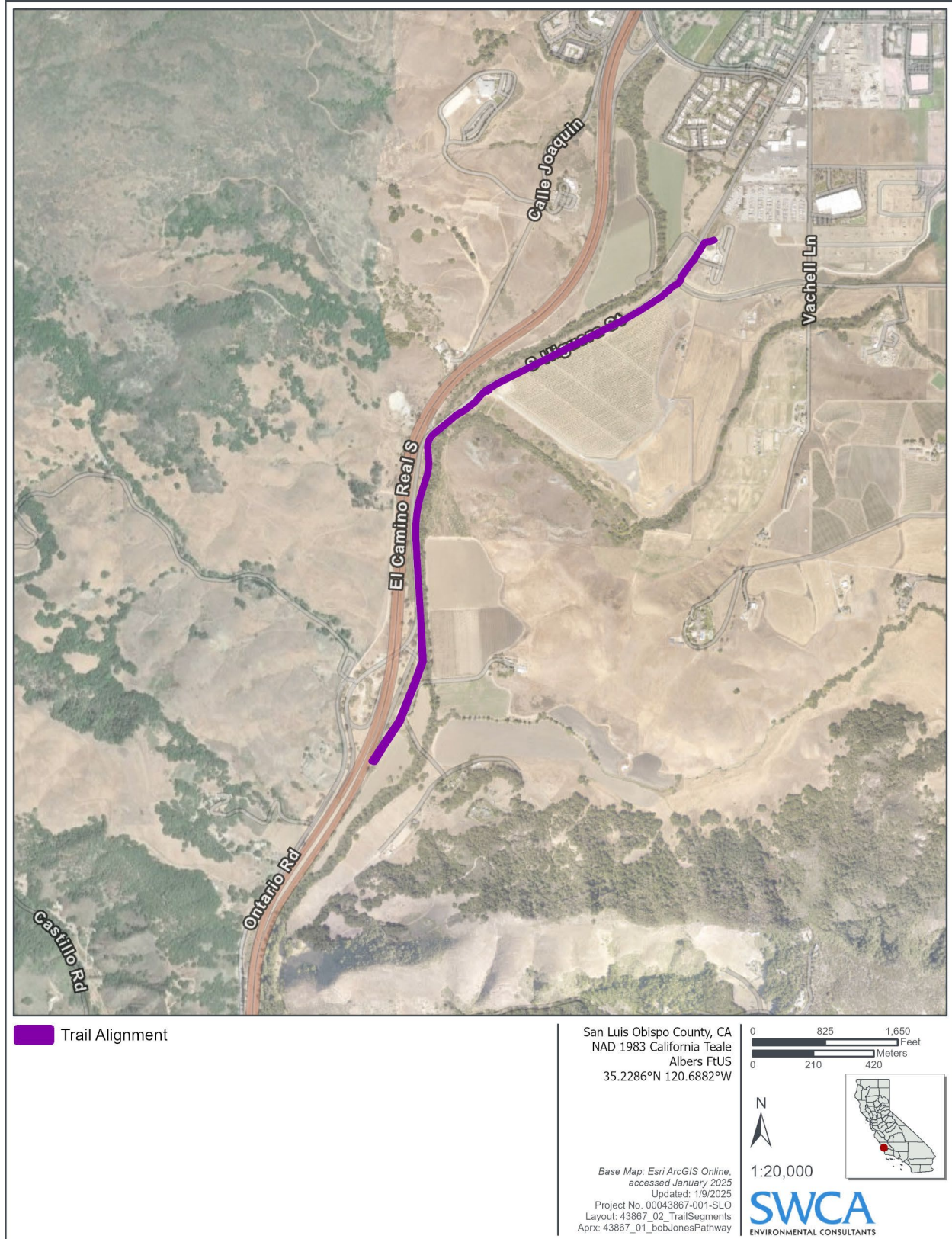


Figure 2. Project Location

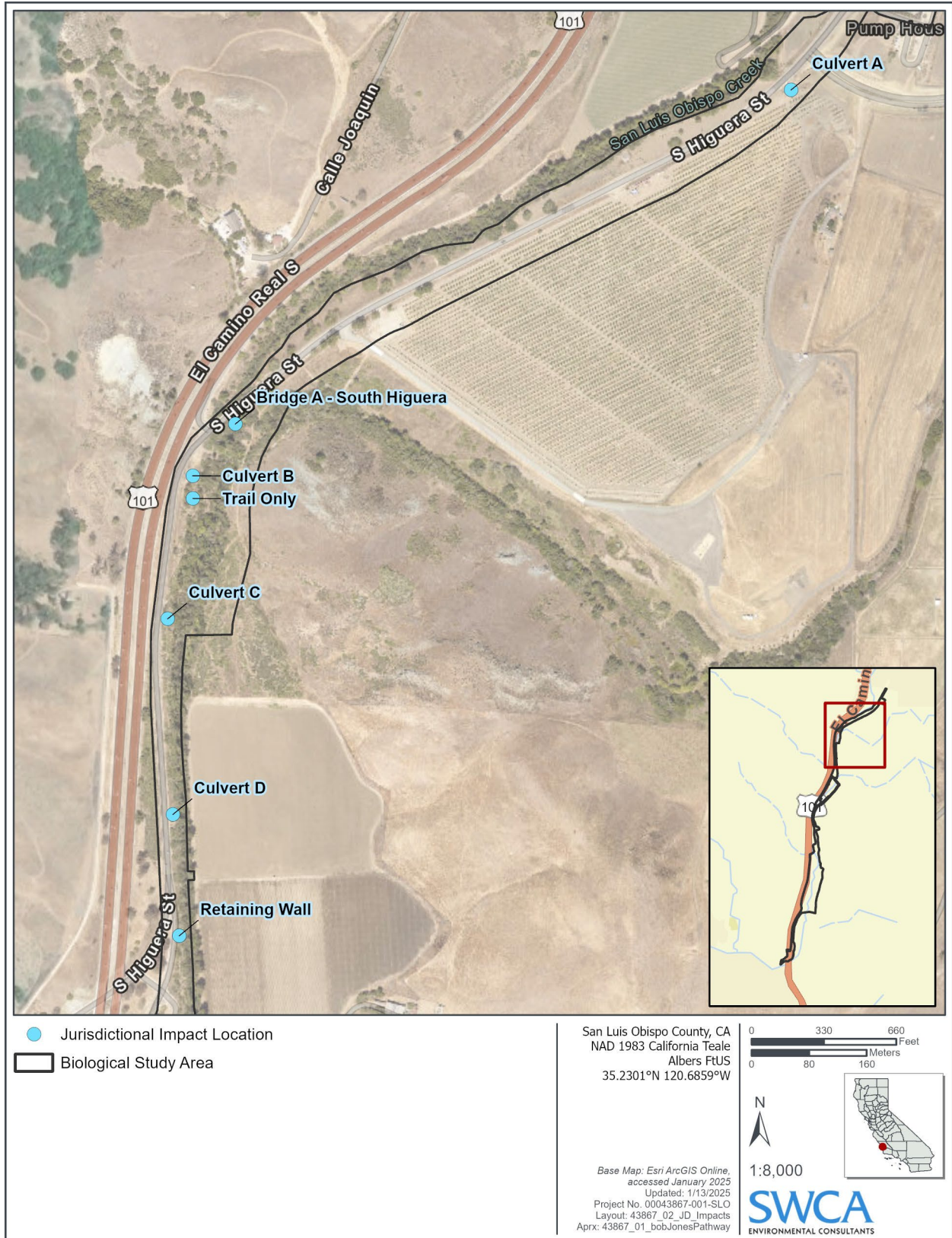


Figure 3. Jurisdictional Impact Locations

2.4 Existing Conditions

As stated above, the project area primarily parallels SLO Creek and US 101 from the Octagon Barn south along the east side of South Higuera Street to of the southern paved limits of Cloverridge Lane. SLO Creek is a perennial stream subject to flooding and is the primary drainage within the project area. Other perennial and ephemeral drainages feed into SLO Creek including the East Fork of SLO Creek, Davenport Creek, and several unnamed tributaries. Riparian habitat is present along SLO Creek throughout the project area and consists of an overstory dominated by various trees species with an understory of shrubby and herbaceous species. The species composition most closely corresponds with the *Platanus racemosa* – *Quercus agrifolia* Woodland Alliance (California sycamore – coast live oak riparian woodland) in the Manual of California Vegetation (MCV, CNPS 2023) classification system. Tree species observed include western sycamore, black cottonwood (*Populus trichocarpa*), box elder (*Acer negundo* var. *californicum*), California bay (*Umbellularia californica*), white alder (*Alnus rhombifolia*), arroyo willow (*Salix lasiolepis*), walnut (*Juglans* sp.), and coast live oak. Species present in the understory include California blackberry (*Rubus ursinus*), mugwort (*Artemisia californica*), stinging nettle (*Urtica dioica*), greater periwinkle (*Vinca major*), and garden nasturtium (*Tropaeolum majus*). Agriculture is the primary land used adjacent to the riparian habitat. Additional habitats present in the project area include coast live oak woodland, annual grassland, California sagebrush – black sage scrub, coyote brush scrub, serpentine bunchgrass, cattail marshes, tree of heaven – black locust groves, and ruderal.

2.5 Impacts to Jurisdictional Areas

Jurisdictional areas that would be filled or otherwise replaced with a structure (permanent loss) were considered permanent impacts. Temporary impacts include areas where vegetation may be removed or disturbed for construction activities or access but will be restored after construction is complete. The project will result in a total of seven impact areas under the jurisdiction of CDFW. Of those seven areas, one would also impact areas under the jurisdiction of USACE and RWQCB (see Appendix A: Sheet EX-7, EX-13). Specifically, impacts include the construction of two new culverts, two culvert extensions, one bridge crossing SLO Creek, and areas where the trail will be constructed within riparian habitat along SLO Creek. See Table 1 below for a summary of the nine impact areas.

Table 1. Summary of Jurisdictional Impact Locations

Location	Station No.	Reference ¹	Proposed Structure	Jurisdiction
North Section				
Culvert A	BJT-N	374+42	Culvert extension	CDFW
Bridge A (South Higuera)	BJT-N	341+65 to 346+55	Prefabricated steel truss bridge and trail	USACE, CDFW, RWQCB
Culvert B	BJT-N	341+40	Culvert	CDFW
Trail Only	BJT-N	339+88 to 341+08	Trail	CDFW
Culvert C	BJT-N	333+51 to 339+74	Culvert and trail	CDFW
Culvert D	BJT-N	323+22 to 329+54	Culvert extension and trail	CDFW
Retaining Wall	BJT-N	317+97 to 323+22	Retaining wall and trail	CDFW

¹Station numbers from Attachment A: Project Plans

The project will result in temporary impacts to areas within USACE and RWQCB jurisdiction, and permanent and temporary impacts to areas within CDFW jurisdiction. Cumulative impacts to areas under the jurisdiction of CDFW will be approximately 1.98 acres and 3,897 linear feet (LF). See Table 2 below for a summary of proposed impacts to jurisdictional waters as a result of the project.

Table 2. Summary of Impacts to Federal and State Jurisdictional Areas

Jurisdiction	Impact Type		TOTAL
	Permanent	Temporary	
USACE / RWQCB (CWA Section 404 / 401)	0 acre / 0 LF	0.006 acre / 50 LF	0.006 acre / 50 LF
CDFW (Section 1600) ¹	0.43 acre / 1,589 LF	1.55 acres / 2,308 LF	1.98 acres / 3,897 LF

¹ CDFW also include USACE / RWQCB CWA Section 404/401 waters and overlap below OHWM.

In addition to jurisdictional impacts, 78 native and non-native trees associated with the riparian habitat will be removed or otherwise impacted to construct the project. Table 3 below summarizes the anticipated impacts to trees associated with riparian habitat.

Table 3. Summary of Anticipated Impacts to Riparian Trees

Scientific Name	Common Name	Number of Trees
<i>Eucalyptus grandis</i> ¹	Grand Eucalyptus	1
<i>Juglans</i> sp.	Walnut	22
<i>Platanus racemosa</i>	California sycamore	2
<i>Populus trichocarpa</i>	Black cottonwood	6
<i>Quercus agrifolia</i>	Coast live oak	7
<i>Quercus lobata</i>	Valley oak	1
<i>Salix laevigata</i>	Red willow	4
<i>Salix lasiolepis</i>	Arroyo willow	28
<i>Sambucus mexicana</i>	Blue elderberry	2
<i>Schinus molle</i> ¹	Peruvian pepper tree	4
<i>Umbellularia californica</i>	California bay	1
Total		78

¹Non-native trees removed in the riparian area will be mitigated for through riparian habitat mitigation and are not included in the replacement tree totals.

2.6 Functions and Values of Impact Areas

The functions and values of the jurisdictional areas identified in the project area were evaluated using the criteria-based method developed by Dr. Eric Stein, published in the ACOE report titled, *Function-based Performance Standards for Evaluating the Success of Riparian and Depressional/Emergent Marsh Mitigation Sites* (Stein, 1999). This method was developed for evaluating the success of riparian and depressional marsh mitigation sites. Although wetland functions and values are often complex, this

method provides an adequate baseline for evaluating the functions and values of existing jurisdictional areas.

Based on this evaluation it was determined that SLO Creek, with its permanent hydrological activity and diverse riparian corridor, provides moderately-high riparian and wetland habitat functions and values overall. No emergent marsh systems were characterized within the study area. Please refer to the Conceptual Habitat Mitigation and Monitoring Plan (CHMMP; SWCA 2013) included herein as Appendix B for more detail on this assessment.

3 MITIGATION ACTIVITIES

Restoration of temporary impacts will occur where project impacts are required within the Temporary Construction Easement (TCE; see Appendix A: EX-4 to EX-7, EX-11, and EX-13) and will include restoring riparian habitat and planting riparian trees to mitigate for those removed within riparian areas.

Mitigation for permanent impacts to jurisdictional areas will be implemented directly adjacent to the site within one proposed mitigation area located on the City of San Luis Obispo's Filippini Ecological Reserve (APN 076-061-075) adjacent to the East Fork of SLO Creek immediately east of the project area (Figure 4). Mitigation will focus on enhancing and expanding riparian habitat adjacent to the East Fork of SLO Creek by planting riparian trees to mitigate for those removed within riparian areas, reducing non-native species cover, and promoting the expansion of riparian habitat areas in the mitigation site.

Mitigation ratios for temporary and permanent impacts to waters of the state will be 1:1 and 2:1, respectively as required by the EIR prepared for the full trail alignment (PMC 2015). Native riparian trees removed will be mitigated for at a 3:1 ratio and riparian understory will be mitigated for at a 1:1 ratio via hydroseeding and erosion controls as necessary. To improve the complexity and diversity of the riparian overstory habitat, each willow (*Salix* sp.) removed will be replaced with one willow of the same species and two other native tree species. Non-native riparian trees removed will be revegetated at a 3:1 ratio with riparian habitat. It should be noted that mitigation for walnuts will consist of planting native locally occurring riparian tree species rather than walnut, as the walnuts within the project area are no longer considered to be southern California black walnut (*J. californica*) but more likely a hybrid between *J. hindsii* and *J. nigra* which were used locally as rootstock for *J. regia*, the agricultural variety (see Appendix C). Finally, native oak trees removed (*Quercus agrifolia* and *Q. lobata*) will be mitigated for at a 4:1 ratio and native oak trees impacted but not removed will be mitigated at a 2:1 ratio following the County of San Luis Obispo requirements. To improve the complexity and diversity of the riparian understory habitat, currently limited to California blackberry (*Rubus ursinus*), mugwort (*Artemisia californica*), stinging nettle (*Urtica dioica*), greater periwinkle (*Vinca major*), and garden nasturtium (*Tropaeolum majus*), the restoration seed mix will consist of 14 native species as identified in Table 7 below. Table 4 below summarizes the mitigation ratios to be implemented for the project.

Table 4. Mitigation Ratio Summary

Jurisdictional Area	Impact Type	Resource Type	Mitigation Ratio
USACE Jurisdiction	Temporary	Waters of the US	1:1
	Permanent	Waters of the US	2:1
	Temporary	Waters of the state	1:1
	Permanent	Waters of the state	2:1
CDFW and RWQCB Jurisdiction	Tree Removal	Native riparian tree ¹	3:1
		Walnut	3:1 ²
		Oak (<i>Q. agrifolia</i> and <i>Q. lobata</i>)	4:1
		Non-native riparian tree	3:1 ³
		Tree Impacts < 25%	Oak (<i>Q. agrifolia</i> and <i>Q. lobata</i>)

¹Excludes southern California black walnut and native oak trees.

²Will be replaced with other locally occurring riparian tree species.

³Mitigation for non-native riparian trees is covered within the mitigation for riparian habitat.

Table 5 below provides a summary of proposed mitigation for temporary and permanent impacts to jurisdictional areas and mitigation for native and non-native riparian tree removal.

Table 5. Proposed Mitigation for Temporary and Permanent Impacts to Jurisdictional Areas

Resource Type	Mitigation for Permanent ¹	Mitigation for Temporary ²
Waters of the U.S. / Waters of the State	0 acre / 0 LF	250 SF / 50 LF
Riparian Habitat ³	0.86 acre / 3,178 LF	1.55 acre / 2,308 LF
Native riparian tree	129 trees	NA
Walnut	66 trees	NA ⁴
Native oak	32 trees	NA ⁴
Total	0.86 acre / 3,178 LF / 227 trees	1.55 acres / 2,308 LF

¹Mitigation for permanent impacts will be mitigated at the proposed Compensatory Mitigation Area.

²Mitigation for temporary impacts will be mitigated at the area of temporary impacts.

³Riparian habitat includes waters of the U.S./State and overlap below OHWM.

⁴All impacts to walnuts and oaks are expected to be removals.

As noted above, a single compensatory mitigation area has been identified on the City of SLO Filipponi Ecological Reserve immediately east of the project area to mitigate for the loss of riparian habitat along the trail alignment and to mitigate for the removal of all riparian trees within jurisdictional waters. The total area of compensatory mitigation on this site will be approximately 1.95 acres, which is greater than the calculated 0.86 acres for mitigating permanent impacts to jurisdictional waters at a 2:1 ratio.



Figure 4. Proposed Compensatory Mitigation Area

3.1 Mitigation Goals

The overall goals of this plan are described herein to ensure that the mitigation approach implemented will successfully fulfill the purpose and intent of proposed restoration activities. Specific performance criteria, which will inform the maintenance and monitoring activities, are described and quantified in Sections 5 and 6 below. The following is a list of the overall goals of this plan:

1. Mitigate for temporary impacts to waters by restoring temporarily disturbed areas through site stabilization, seeding, and planting of riparian trees to mitigate for those impacted during construction.
2. Mitigate for permanent impacts to jurisdictional waters by enhancing and expanding approximately 1.95 acres of riparian habitat adjacent to the East Fork of SLO Creek on the City of SLO's Filipponi Ecological Reserve through planting riparian trees to replace those removed by the project and removing non-native species.

To meet the above goals, the following is being proposed as part of this plan to mitigate for impacts by the project to jurisdictional waters:

- Restore areas of temporary project impacts through seeding and planting a variety of native riparian plant species including replacement riparian trees
- Mitigate for permanent project impacts by creating, enhancing, and expanding riparian habitat through planting replacement riparian trees at a 3 to 1 ratio for project impacts

A significant change in functions and values is not expected because any loss of vegetation will be minimized, and stream contours will be restored as close as possible to their pre-construction condition. Enhanced vegetative structure and diversity in restored areas is anticipated to help improve stream functions and values; improve water quality; and provide greater wildlife cover and forage areas.

4 MITIGATION IMPLEMENTATION

The following describes the implementation methods for restoration of riparian habitat within the temporary impact areas along the trail alignment and the nearby offsite compensatory riparian habitat mitigation acreage at Filipponi Ecological Reserve.

4.1 Site Preparation

Site preparation of temporary impact area mitigation will consist of restoring the disturbed areas to original contours where possible. Areas not able to be returned to original contours will be graded to a hydrologically stable configuration that matches adjacent undisturbed areas. Bare areas are to be hydroseeded and erosion control material, such as erosion control blankets, used to stabilize slopes and disturbed upland areas, as appropriate.

4.2 Invasive Species Removal

Prior to planting in restoration areas and compensatory mitigation areas, non-native invasive species will be removed by hand or mechanical treatment. If the County determines that the use of herbicides to combat non-native species is warranted, herbicides may be utilized on a selective/ as needed basis.

4.3 Planting Plan

Following site preparation, seeding and planting will be implemented. Planting efforts should be completed in the late fall to take advantage of plant dormancy, rooting period, and winter rains. Where possible, plant materials will be obtained from within the SLO Creek watershed. However, poor availability, delays from seasonal constraints, and/or viability may require obtaining plant material from commercial sources. If purchasing plant material from a commercial source is necessary, plant material will be sourced from local nursery facilities that specialize in native plants. Fertilizer may be used during initial planting efforts.

4.3.1 Seeding and Planting

Temporarily disturbed areas will be seeded with either a native erosion control seed mix (outside of riparian habitat) or a riparian seed mix (in riparian habitat). These seed mixes may be hand broadcast or hydroseeded. As needed, best management practices (BMPs) including straw and/or natural coir blankets may also be installed in combination with seeding to ensure germination success and stable site conditions. A combination of the native erosion control seed mix and riparian seed mix may be applied to exposed areas following site preparation in the offsite mitigation area as needed but the final seed mix will be determined by the County during implementation. Table 6 and 7 below provides recommendations for the native erosion control seed mix and riparian seed mix.

Table 6. Native Erosion Control Seed Mix¹

Scientific Name	Common Name	Lbs. / Acre*
<i>Bromus carinatus</i>	California brome	20
<i>Festuca microstachys</i>	Small fescue	8
<i>Trifolium willdenovii</i>	Tomcat clover	4
<i>Acmispon americanus</i>	American bird's foot trefoil	2
<i>Artemisia douglasiana</i>	Mugwort	2
<i>Elymus triticoides</i>	Creeping rye	2
<i>Eschscholzia californica</i>	California poppy	3
<i>Melica californica</i>	California melica	3
<i>Stipa pulchra</i>	Purple needle grass	2

¹Final seed mix to be determined by seed availability and habitat conditions at restoration site.

*Seeding rate to be determined in coordination with seed supplier / restoration contractor.

Table 7. Riparian Seed Mix¹

Scientific Name	Common Name	Lbs. / Acre*
<i>Artemisia douglasiana</i>	Mugwort	1.5
<i>Baccharis glutinosa</i>	Marsh baccharis	1.5
<i>Baccharis salicifolia</i>	Mule fat	1.5
<i>Clematis ligusticifolia</i>	Creek clematis	0.5
<i>Distichlis spicata</i>	Salt grass	2
<i>Elymus triticoides</i>	Creeping rye	2
<i>Epilobium ciliatum</i>	Willow herb	0.5

Scientific Name	Common Name	Lbs. / Acre*
<i>Mimulus guttatus</i>	Seep monkeyflower	0.5
<i>Festuca microstachys</i>	Small fescue	6
<i>Hordeum brachyantherum</i>	Meadow barley	3
<i>Hordeum depressum</i>	Alkali barley	2
<i>Juncus patens</i>	Spreading rush	0.5
<i>Melica imperfecta</i>	Little California melic	2
<i>Verbena lasiostachys</i>	Western vervain	0.5

¹Final seed mix to be determined by seed availability and habitat conditions at restoration site.

*Seeding rate to be determined in coordination with seed supplier / restoration contractor.

In addition to the seeding efforts described above, native riparian trees will be planted within the temporary impact areas and Filipponi Ecological Reserve to meet the required number of riparian mitigation trees. Table 8 provides a list of recommended potential species to be used for planting. These species were selected based on the riparian community present within the project area. Final plant selection will be based on availability of locally sourced material and availability of local container stock. Appropriate substitutions may be made, based on recommendations from a qualified biologist/restoration specialist familiar with the project area if these species are not available at the time of planting.

Table 8. Riparian Plant Palette¹

Scientific Name	Common Name	Size ²	Spacing (feet)	Number
Trees and Shrubs				
<i>Acer negundo</i>	Box elder	1-gallon	7-10	31
<i>Platanus racemosa</i>	Western sycamore	1-gallon	7-10	21
<i>Populus trichocarpa</i>	Black cottonwood	1-gallon	7-10	49
<i>Quercus agrifolia</i>	Coast live oak	1-gallon	7-10	55
<i>Quercus lobata</i>	Valley Oak	1-gallon	7-10	4
<i>Salix laevigata</i>	Red willow	Cutting	7-10	4
<i>Salix lasiolepis</i>	Arroyo willow	Cutting	7-10	28
<i>Sambucus mexicana</i>	Blue elderberry	1-gallon	7-10	6
<i>Umbellularia californica</i>	California bay	1-gallon	7-10	29

¹Final plant palette to be determined based on availability of material and habitat conditions at restoration site.

²Size to be based on availability.

Once the site preparation is complete, cuttings and plantings shall be installed. Planting holes will be excavated to a diameter and depth approximately twice the size of the root ball. Plantings will be placed in a hole with the root crown just above the surrounding soil level to prevent crown rot. All plants shall be planted in randomly spaced; naturally clumped patterns that follow the spacing recommendations provided in Table 9. Coarse organic mulch may be placed around container plants and cylindrical wire mesh cages may be installed over each container plant to minimize loss to herbivores if needed.

Cuttings will be collected from mature plants along SLO Creek. Cuttings should consist of stems that are approximately 0.5- to 1-inch in diameter and approximately two- to three-feet long. All cuttings should be obtained during the plant's natural dormant period or immediately following bud break in the early spring

(i.e., typically November to March) and planted within 24 hours of cutting. Cuttings should be stored (if required) with the lower end, including at least on node, immersed in water. Planting holes will be excavated using hand tools or an auger. The lower end of cuttings may be dipped in a rooting hormone (e.g., indole-3-butyric acid or equivalent) prior to planting, to increase success. All cuttings will be planted vertically in the holes at depths that cover approximately 2/3 of cutting. Planting holes will be filled with water and backfilled with native soil. Soil should be firmly compacted around each cutting to eliminate air pockets in the soil. If cutting material is insufficient, commercial stock may be used to supplement cuttings.

4.4 Irrigation Plan

Restoration and compensatory mitigation areas will be evaluated to determine if supplemental irrigation will be necessary to facilitate growth and success goals. Irrigation, if necessary, will be either drip-line irrigation or spot watering. Areas to be planted that are regularly inundated will not be irrigated.

5 MAINTENANCE PLAN

Maintenance during plant establishment is necessary to ensure success of the mitigation effort. The maintenance period will begin immediately upon completion of the mitigation planting and seeding and is tentatively planned for a three-year period. The mitigation plantings and seeded areas will be monitored for an additional two years to ensure the sites are self-sustaining. Maintenance activities shall occur as frequently as needed during the three-year maintenance period. The maintenance program will ensure that watering of installed plants, weed control, debris removal, vandalism control, replanting, plant protection, and site protection are performed adequately.

5.1 Watering, Weed Control, and Herbicide Use

As mentioned previously, drip-line irrigation or spot watering will be used as necessary. Weed control and debris removal will be performed during the regularly scheduled monitoring site visits. If herbicide is used for invasive species removal, appropriate measures will be used to ensure the protection of water quality.

5.2 Vandalism

Vandalism may occur within restoration and mitigation areas. Any vandalism of restoration plantings that compromise success goals will be rectified with additional restoration plantings.

5.3 Remedial Plantings and Fertilizing

Remedial plantings will be utilized as necessary to remain in compliance with the targeted success goals/criteria. Fertilizer may be used during initial remedial planting efforts.

6 MONITORING PLAN

The goal of the monitoring plan is to document the success of the restoration and compensatory mitigation. Regular monitoring will allow for the timely identification of any issues that may arise (e.g., erosion, mortality, invasive species, etc.). Therefore, annual monitoring will occur at least once a year

during the spring season when plants are most easily identifiable and growing. Field monitoring will be followed by preparation of brief reports that include photo documentation and evaluation of the success of the mitigation effort based on whether the annual performance goals for that year were met.

6.1 Monitoring Schedule

The monitoring program would consist of general monitoring visits and annual biological data collection visits in the spring season. General monitoring visits can be conducted concurrently with maintenance visits. The focus of general monitoring visits is to assess the plantings need for supplemental water or other maintenance-related issues. The focus of the biological monitoring visits is to collect qualitative data that will provide an assessment of the site's relative vegetative cover and tree survival.

At a minimum, the restoration specialist monitors the site quarterly during the first 3 years after planting/seeding and semi-annually for the fourth and fifth years of the monitoring program. After larger storm events that inundate the site, the restoration specialist inspects the site for damage. It is the responsibility of the County, in coordination with the restoration specialist to ensure that the project is maintained as necessary during the monitoring period.

Permanent photo points may be established throughout the mitigation site to assist in tracking the success of the mitigation program. Permanent photo points may also be established during the preparation of the as-built planting plan, and ground view photos taken during each monitoring year from the same vantage points.

6.2 Monitoring Methods

The goal of the mitigation monitoring will be to document the success of mitigation plantings and identify any potential concerns that may inhibit the successful establishment of mitigation plantings. Regular monitoring will allow for the timely identification of any issues that may arise (i.e., irrigation needs, herbivory, mortality, etc.). Therefore, monitoring will occur at least once a year, for at least five years, during the spring season when plants are most easily identifiable and growing. Monitoring will include quantitative and qualitative assessments of mitigation success including:

- Survival and mortality
- Percent vegetation cover
- Invasive species cover
- Evidence of new growth
- Evidence of slope/bank stability

If any plantings experience mortality, they shall be replaced as soon as feasible during the appropriate season (i.e., November to March, following sufficient precipitation). If a declining trend is indicated in monitoring results for any of the performance criteria, the monitor shall make recommendations for remedial actions (e.g., additional protective devices, supplemental weed abatement, modified watering regime, etc.) and provide adaptive management.

A qualified monitor will complete the following activities during each monitoring event:

- Establish (during Year 1) photo-documentation points and take photographs of the mitigation site. Photos will be taken from approximately the same location and aspect during each monitoring event.

- Document any mortality and identify the location.
- Survey planting areas and generate a list of all species present in the planting area, noting whether a species is native or invasive.
- Document percent cover of invasive species composition.
- Assess and document the overall health of all plantings.
- Document any signs of erosion.

6.3 Performance Criteria

Mitigation tree plantings and seeded areas will be monitored for survival. Baseline data on herbaceous and shrub cover will be collected immediately prior to project implementation. Table 9 below summarizes the minimum survival thresholds to measure mitigation success.

Table 9. Mitigation Performance Criteria

Criteria	Monitoring Year				
	1	2	3	4	5
Survival	75% of 227 planted trees	80% of Year 1 survivorship	85% of Year 2 survivorship	90% of Year 3 survivorship	100% of Year 4 survivorship
Percent Native Herbaceous Cover¹	50% of baseline	65% of baseline	75% of baseline	85% of baseline	100% of baseline
Percent Native Shrub Cover¹	50% of baseline	65% of baseline	75% of baseline	85% of baseline	100% of baseline
Percent Invasive Species Cover²	≤5%	≤5%	≤5%	≤5%	≤5%

¹Percent native cover values will include evaluation of all native species seeded, planted, or naturally recruiting.

²Invasive species are those with a Cal-IPC rank of “high” and/or species that are known to be present within the surrounding areas including, but not limited to, black mustard (*Brassica nigra*), poison hemlock (*Conium maculatum*), sweet fennel (*Foeniculum vulgare*), giant reed (*Arundo donax*), English ivy (*Hedera helix*), bigleaf periwinkle (*Vinca major*), elm leaf blackberry (*Rubus ulmifolius* var. *ulmifolius*), and castor bean (*Ricinus communis*).

6.4 Annual Reporting

The monitoring results and any maintenance activities will be summarized in annual reports, including any recommendations for remedial measures. Photographs from designated points will be included to visually document progress. Each report shall include at least the following information:

- Names and qualifications of monitoring personnel and report preparers
- Date of initiation of plant installation and date plant installation was completed
- Comparison of year-to-year conditions with baseline or previous year's conditions
- Any remedial or maintenance actions taken or needed
- Annual photo-documentation representative of all restoration areas, taken from a vantage point from which changes in size and cover of plants is identifiable

Annual monitoring reports shall be submitted to the USACE, RWQCB, and CDFW by December 31st of each monitoring year.

7 CONTINGENCY MEASURES

7.1 Adaptive Management

The restoration and compensatory mitigation sites should be self-sustaining, i.e., no maintenance or artificial irrigation, for a period of two years to be considered successful. If replanting is determined to be necessary, replanted areas will be monitored and maintained for a period agreeable to the relevant regulatory agencies. If a total site failure is evident, the applicant shall coordinate with the involved regulatory agencies to determine what alternative compensatory mitigation will be required, including potential identification of alternative compensatory mitigation sites.

7.2 Long-term Management

If it becomes apparent that restoration and compensatory mitigation will not attain the final success criteria within the expected time frame, the applicant will begin an assessment of reasons for failure and will work with the involved regulatory agencies to determine an acceptable solution. If the site trends indicate that the success criteria will eventually be met but in a longer timeframe than anticipated, maintenance and monitoring will continue until the criteria have been satisfied.

8 CONCLUSION

This plan describes the goals, methods, and monitoring requirement of restoration of temporary impact areas and compensatory mitigation for permanent impacts to jurisdictional waters under the jurisdiction of USACE, CDFW, and RWQCB. Mitigation will be implemented to meet the mitigation requirements required by the EIR for the project and following County requirements for mitigating impacts to native oak trees. Specifically, this plan includes a total of 2.43 acres of restoration, which includes replacement riparian tree plantings within temporary impact areas and approximately 1.95 acres of compensatory mitigation for permanent impacts through planting replacement riparian trees within the Filipponi Ecological Reserve. In total, at least 227 mitigation riparian trees will be planted within the temporary impact areas and Filipponi Ecological Reserve. Maintenance will occur for a minimum of three years and

monitoring will occur for a minimum of five years, and longer if deemed necessary. All, maintenance activities and results of monitoring events will be summarized in annual reports to be submitted to USACE, RWQCB, and CDFW by December 31st of each monitoring year.

9 REFERENCES

California Native Plant Society. 2023. A Manual of California Vegetation, Online Edition. Available at: <http://www.cnps.org/vegetation>. CNPS, Sacramento, California. Most recently accessed September 2023.

California Wetlands Monitoring Workgroup. 2009. Using CRAM (California Rapid Assessment Method) to Assess Wetland Projects as an Element of Regulatory and Management Programs. 46 pp.

PMC. 2015. Bob Jones Pathway – San Luis Obispo to Ontario Road Project Final Environmental Impact Report. February 2015.

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APPENDIX A

Project Plans

APPENDIX B

Conceptual Habitat Mitigation and Monitoring Plan

APPENDIX C

Land Conservancy of San Luis Obispo County Letter

APPENDIX D

Representation Site Photographs



Photo 1. View of SLO Creek downstream of the existing South Higuera Street Bridge where Bridge A will be constructed, looking southwest (9-12-2023).



Photo 2. View of the location of Culvert A extension, looking southwest (9-12-2023).



Photo 3. View trail alignment between South Higuera and SLO Creek, looking northwest (9-12-2023).



Photo 3. View of the location of the retaining wall north of Cloverridge Lane, looking southeast (9-12-2023).