Coastal Distribution System F-Pipeline Project

Addendum to the Pajaro Valley Water Management Agency Local Water Supply and Distribution Project and Basin Management Plan Update Final Environmental Impact Reports

SCH Nos. 1997021006 and 2000062030

OCTOBER 2019

PREPARED FOR

Pajaro Valley Water Management Agency

PREPARED BY

SWCA Environmental Consultants

COASTAL DISTRIBUTION SYSTEM
F-PIPELINE PROJECT

ADDENDUM TO THE
PAJARO VALLEY WATER MANAGEMENT AGENCY
LOCAL WATER SUPPLY AND DISTRIBUTION PROJECT AND
BASIN MANAGEMENT PLAN UPDATE FINAL
ENVIRONMENTAL IMPACT REPORTS

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CHAPTER 1. INTRODUCTION AND SUMMARY OF CONCLUSIONS

1.1 INTRODUCTION

The Pajaro Valley Water Management Agency (PV Water; formerly referred to as PVWMA), serving as the lead agency under the California Environmental Quality Act (CEQA), certified a Final Environmental Impact Report (EIR) for the PVWMA Local Water Supply and Distribution Project in 1999 (State Clearinghouse #1997021006; herein referred to as the 1999 EIR) and certified a Final EIR for the Pajaro Valley Basin Management Plan (BMP) Update in 2014 (State Clearinghouse #2000062030; herein referred to as the 2014 EIR). This document is an addendum to both the 1999 EIR and the 2014 EIR, which are incorporated by reference.

1.1.1 Local Water Supply and Distribution Project (1999 EIR) Summary

PV Water was the lead agency in developing the 1999 EIR. PV Water published the 1999 EIR on May 7, 1999, and the PV Water Board of Directors certified it as complete and adequate under CEQA on May 19, 1999. This document is an Addendum to the 1999 EIR, which is incorporated by reference. The Findings and Statement of Overriding Considerations for the project and the Mitigation Monitoring and Reporting Program (MMRP)—prepared in accordance with State CEQA Guidelines Sections 15091 (Findings), 15093 (Statement of Overriding Considerations), and 15097 (Mitigation Monitoring or Reporting)—are also incorporated by reference. The Findings document identifies impacts resulting from the project, and the MMRP outlines mitigation measures to reduce significant impacts to less-than-significant levels. All potential project-related significant impacts resulting from the Local Water Supply and Distribution Project would be mitigated to less-than-significant levels, with the exception of the following significant and unavoidable impact: the loss of prime farmland (related to the Harkins Slough, Murphy Crossing, and College Lake components, which are not part of the proposed Coastal Distribution System [CDS] F-Pipeline Project [F Line Project or Project]). As noted in the analysis below, the proposed F Line Project modifications would not result in any permanent conversion of agricultural lands.

The 1999 EIR evaluated the environmental impacts of the Local Water Supply and Distribution Project under CEQA. The 1999 EIR describes a series of facility projects that would more fully utilize local water supply sources and distribute these sources (in addition to imported water) to service area users. These projects included the following: College Lake; Harkins Slough; diversions from the Pajaro River at Murphy Crossing; Watsonville Wastewater Reclamation Option; and Distribution Systems, including the Coastal Distribution System (CDS), Murphy Crossing Service Area, and Inland Service Areas. Chapters 1 and 2 of the 1999 EIR describe the purpose of and need for the project, project background, and the construction and operating characteristics of these projects.

The Coastal Service Area identified in the 1999 EIR included approximately 8,200 irrigated acres adjacent to and between Highway 1 and the Pacific Ocean. The existing (current) CDS provides a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz Counties. The pipe diameter for the CDS was assumed to range between 8 to 48 inches, with a majority of the pipes ranging between 12 and 36 inches. The trench requirements were estimated to be 4 feet wide and 6 to 8 feet deep, and the pipelines would be located within or adjacent to road rights-of-way and parcel boundaries, and, where necessary, would cross through private land parcels. The 1999 EIR assumed that roadways would be maintained to allow one-lane passage at all times, and a traffic control plan would be required.

1.1.2 Basin Management Plan Update (2014 EIR) Summary

PV Water's BMP Update provides a review and update of previous water supply studies, summarizes the Pajaro Valley's seawater intrusion problems, and recommends a suite of projects to stop seawater intrusion and basin overdraft. The BMP Update includes seven components (or primary projects and programs), which were simulated using the Pajaro Valley Hydrologic Model and were considered adequate to solve more than 90% of the seawater intrusion and basin overdraft problems. These seven components included:

- Increased Recycled Water Deliveries;
- Conservation;
- Harkins Slough Recharge Facilities Upgrades;
- Increased Recycled Water Storage at Treatment Plant;
- Watsonville Slough with Recharge Basins;
- College Lake with Inland Pipeline to CDS; and
- Murphy Crossing with Recharge Basins.

The College Lake with Inland Pipeline to CDS component addresses some aspects of the CDS by providing a new source of water. This component would increase the storage capacity at College Lake and construct new conveyance pipeline either to the Recycled Water Facility or to the existing CDS. Pipeline construction in the vicinity of the CDS is addressed in this EIR. The proposed F Line Project is an expansion of the existing CDS.

Seven additional projects were identified for potential future implementation should the selected portfolio not meet the planning-level expectations with respect to supply yield or demand offset using an adaptive management method of project implementation. One of these additional projects was the CDS Pipeline Expansion, which is the subject of this addendum. All potential project-related significant impacts resulting from the Pajaro Valley BMP Update would be mitigated to less-than-significant levels, with the exception of the following significant and unavoidable impact: the loss of prime farmland (related to the Harkins Slough, Watsonville Slough, Murphy Crossing, and College Lake components, which are not part of the proposed Project).

The existing CDS provides a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz Counties. It includes approximately 19.6 miles of 6-inch to 42-inch pipeline.

1.2 PROJECT PURPOSE AND OBJECTIVES

The purpose and goals of the PV Water CDS (including the addition of the proposed Project) and associated water supply facilities (Recycled Water Facility, Managed Aquifer Recharge and Recovery Facility, Blend Wells, and Connection to the City of Watsonville's Potable Water System) are to stop groundwater overdraft and halt seawater intrusion by increasing the use of delivered, supplemental irrigation water and decreasing coastal groundwater production. The Project would allow approximately 1,300 acres of irrigated agricultural lands along the coast to be irrigated with supplemental irrigation supply water instead of groundwater, thereby reducing seawater intrusion in the Pajaro Valley's groundwater supply. In 2017, total water use in the Pajaro Valley was 49,404 acre-feet (af), approximately 10% less than the rolling 10-year average of 54,755 af. Approximately 45,644 af of that supply was from groundwater and the CDS delivered approximately 4,203 af to the coastal area. The

proposed project would increase the acreage that could receive supplemental water, thereby decreasing groundwater use.

1.3 PROJECT CHANGES

The Project presents minor modifications to the CDS project addressed in the 1999 EIR and 2014 EIR. The proposed F line, F1 line, F6 line, F7 line, and F8 line pipelines would branch off the existing CDS to provide reclaimed water for irrigation to agricultural areas along San Andreas Road in Santa Cruz County that currently are on a groundwater supply severely impacted by seawater intrusion. The F Line Project would add approximately 2.9 miles of distribution piping and 15 agricultural turnouts designed to provide up to approximately 2,600 acre-feet per year (afy) of supplemental irrigation water to 1,300 irrigated acres, extending the existing 5,500-acre CDS service area (Figures 1 and 2).

1.4 PURPOSE OF ADDENDUM

Section 15162 of the State CEQA Guidelines describes the scenarios in which preparation of a subsequent EIR would be required due to project revisions made after an EIR has been certified. Consistent with Section 15162, the brief analysis below demonstrates that:

1) The Project would not involve substantial changes that would result in new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the 1999 EIR or the 2014 EIR;
2) The Project would not involve substantial changes with respect to the circumstances under which the Project would be undertaken that would result in new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the 1999 EIR or the 2014 EIR;
3) The identification of new information of substantial importance would not result in new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the 1999 EIR or the 2014 EIR, or result in the identification of new or considerably different feasible mitigation measures or Project alternatives that would substantially reduce one or more significant effects of the Project.

Additionally, Section 15164 of the State CEQA Guidelines provides the authority for preparing an Addendum to a previously certified EIR. As required in Subsection (e) of Section 15164, substantial evidence supporting the lead agency's decision not to prepare a subsequent EIR pursuant to State CEQA Guidelines Section 15162 is provided. The analysis below strictly relates to the changes associated with the 1999 Local Water Supply and Distribution Project and the 2012 BMP Update. It should also be noted that the information below is focused as a post-EIR CEQA checklist in accordance with State CEQA Guidelines Sections 15162 and 15164. Based on the following analysis, preparation of a subsequent EIR to address the Project would not be required based on the following analysis.

This document is an Addendum to both the 1999 EIR and the 2014 EIR, and has been prepared to address the CDS Pipeline Expansion and evaluate the impacts related to modifications to the original project identified in the 1999 EIR and 2014 EIR. Pursuant to Section 15164 of the State CEQA Guidelines, PV Water, as the lead agency, shall prepare an Addendum to the previously certified EIR if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR have occurred. The scope of this Addendum focuses on the environmental effects associated with specific additions to the CDS component of the Local Water Supply and Distribution Project.

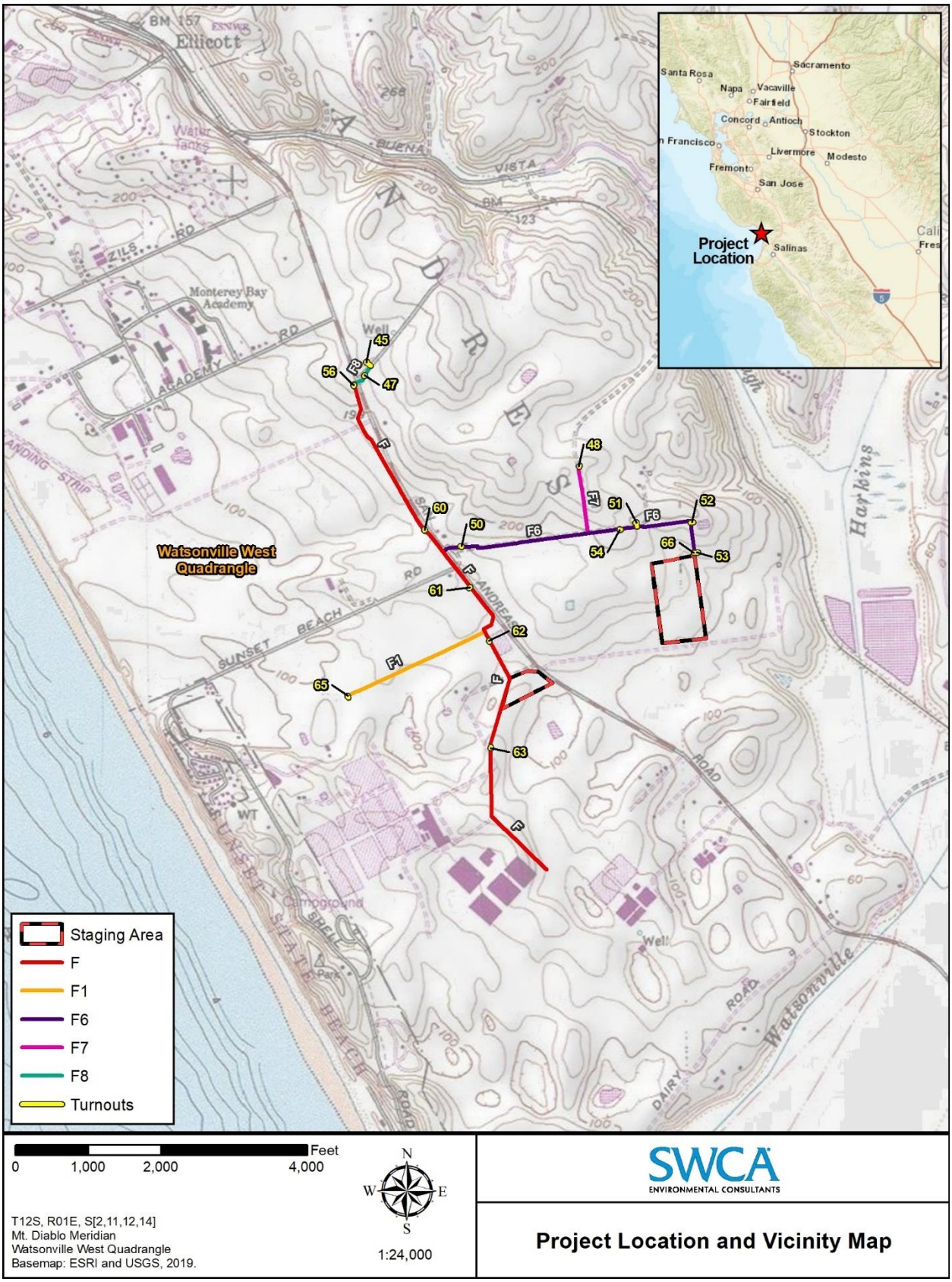

Figure 1. Project location and vicinity map.

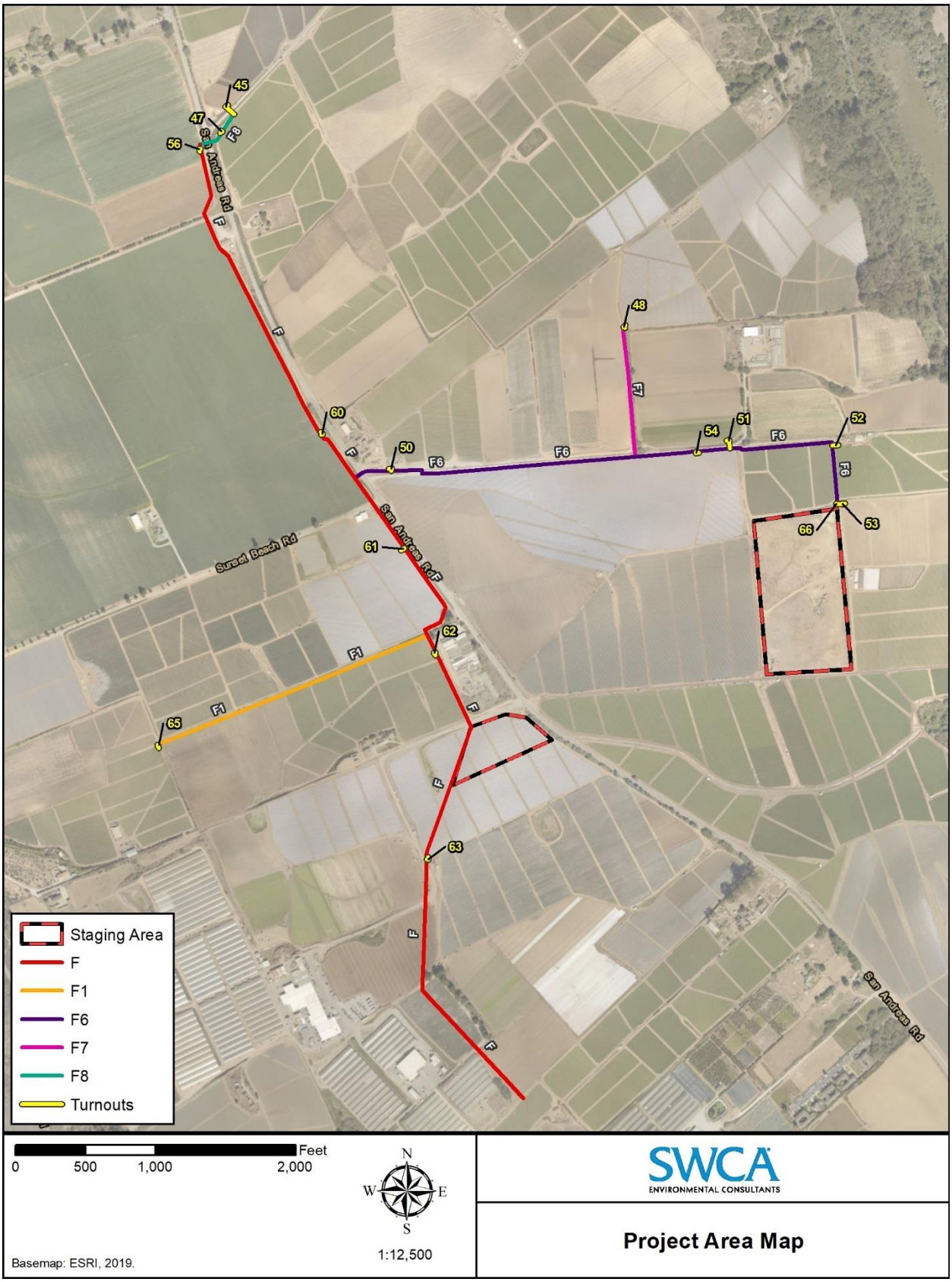

Figure 2. Project area map.

The purpose of this review is to evaluate potential environmental impacts associated with proposed changes to the previously approved project, specifically, an additional 2.9 miles of pipeline to be included in the CDS. In addition, trench excavations would be slightly wider (6.5 feet versus 4 feet wide). Additional CEQA review beyond this addendum, in the form of a Supplemental EIR, would only be necessary if the proposed changes to the project created new significant impacts or a substantial increase in the severity of significant impacts identified in the 1999 EIR and 2014 EIR used to approve the project.

According to State CEQA Guidelines Section 15162:

> (a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
>
> (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
>
> (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
>
> (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
>
> (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
>
> (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
>
> (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
>
> (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

State CEQA Guidelines Section 15164 provides the following guidance for preparation of an EIR addendum:

> (a) The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.

(c) An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.

(d) The decision making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project.

(e) A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

This Addendum has been prepared consistent with State CEQA Guidelines Sections 15162 and 15164 to document that the proposed Project modifications would not result in new significant impacts or a substantial increase in the severity of a previously identified significant impact; therefore, preparation of a supplemental or subsequent EIR is not required.

1.5 SUMMARY OF CONCLUSIONS

This Addendum to the 1999 EIR and 2014 EIR demonstrates that the environmental analysis, impacts, and mitigation requirements identified in the 1999 EIR and 2014 EIR remain substantively unchanged by the project modifications described herein, and supports the finding that the proposed Project does not raise any new issues and does not exceed the levels of impact significance identified in the 1999 EIR and 2014 EIR. Accordingly, preparation of a subsequent EIR is not necessary pursuant to State CEQA Guidelines Sections 15162 and 15164. This decision is based on substantial evidence, as set forth in the following discussion of the proposed Project modifications and the environmental impacts of those modifications.

This Addendum need not be circulated for public review (State CEQA Guidelines Section 15164(c)); however, an addendum is required to be considered by the decision-making body along with the previously certified 1999 EIR and 2014 EIR prior to deciding on the Project (State CEQA Guidelines Section 15164(d)).

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CHAPTER 2. PROJECT MODIFICATIONS

2.1 PROJECT LOCATION

The existing CDS provides a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz Counties (see Figure 1). The F Line Project would connect to the existing CDS pipeline system approximately 0.6 mile northwest of Dairy Road and extend to the north and west. The service area is bounded by Sunset State Beach and the Pacific Ocean to the west, Galligans Slough and Highway 1 to the east, Buena Vista Drive and La Selva Beach to the north, and Dairy Road and Watsonville Slough to the south.

2.2 SUMMARY OF ORIGINAL APPROVED PROJECT DESCRIPTION

As a result of the 1999 EIR, PV Water implemented several projects to provide supplemental water supplies. One of these was the CDS, a distribution system used to convey supplemental water supplies to farms in coastal areas in portions of Santa Cruz and Monterey Counties within the PV Water service area. The supplemental sources include recycled water, stored water from the Harkins Slough Managed Aquifer Recharge and Recovery Facility, groundwater from blend wells, and City potable supplies. These supplies are delivered through three existing pipelines. Water delivered through the CDS replaces groundwater that would otherwise be pumped from coastal wells. In this sense, delivered water provides "in lieu recharge" to the aquifer.

The 2014 EIR addressed the environmental impacts of the 2012 BMP Update at a programmatic level. PV Water will conduct additional project-level design studies and CEQA review, as needed, on the specific projects proposed in the 2014 EIR. As part of the BMP Update, a total of 44 potential projects were screened, ranked, and prioritized for feasibility, cost, and other factors. Based on hydrologic modeling, the following seven priority or primary components to stop seawater intrusion and basin overdraft were selected for the BMP Update portfolio: (1) Conservation; (2) Increased Recycled Water Storage at Treatment Plant; (3) Increased Recycled Water Deliveries; (4) Harkins Slough Recharge Facilities Upgrades; (5) Watsonville Slough with Recharge Basins;(6) College Lake with Inland Pipeline to CDS; and (7) Murphy Crossing with Recharge Basins. These seven components were considered adequate to solve more than 90% of the seawater intrusion and basin overdraft problems

The 2014 EIR also addressed a suite of secondary BMP Update component alternatives, several alternative locations, and a "No Project" alternative. As part of an adaptive management strategy, seven additional projects were included for future consideration should the recommended projects and programs not provide the projected yields, or if these yields are not sufficient to balance the basin and halt seawater intrusion. These secondary alternatives included:

- CDS Expansion
- Winter Recycled Water Deep Aquifer Storage and Recovery
- San Benito County Groundwater Demineralization at Wastewater Treatment Plant
- Expanded College Lake, Pinto Lake, Corralitos Creek, Watsonville Slough, and Aquifer Storage and Recovery,
- Seawater Desalinization, and
- Bolsa De San Cayetano with Pajaro River Diversion.

The 2014 EIR added, as part of the initial suite of options, College Lake with Inland Pipeline to CDS, which would supply 2,400 afy. The Project option would include an adjustable weir that could raise the elevation from 60.1 feet to 62.5 feet to increase the storage capacity of the lake, add a pump station and treatment plant, and add a 5.8-mile water main to either the Recycled Water Facility or directly to the CDS, which would provide an additional source of surface water for the CDS and CDS Expansion.

The proposed F Line Project is part of the second tier alternative, CDS Expansion Project, identified in the 2014 EIR. As discussed in the 2014 EIR, the existing CDS was installed to deliver water from more inland sources to coastal growers. Depending on the success of conservation, expansion of the CDS may be needed to expand the delivered water area, reduce groundwater pumping near the coast, and stop seawater intrusion and balance the basin. This alternative does not create additional water; therefore, it has no project yield, but rather contains the infrastructure required to deliver the water from other (existing and proposed) projects to coastal growers outside of the existing delivered water zone. The alignment proposed in the 2014 EIR would extend north from the existing CDS to serve agricultural land south of Zils Road. The expanded area had an average water demand of approximately 2,000 afy. The pipeline routing could be modified if the North Dunes recharge basin (part of the Watsonville Slough with Recharge Basin component) were to be built.

As analyzed in the 2014 EIR, potential environmental effects associated with this Project would primarily be related to construction-related impacts, as the pipeline expansion would be located nearly entirely within existing roadways (or unpaved agricultural roads). Potential construction-related impacts would include impacts to air quality, greenhouse gas (GHG) emissions, noise, erosion, and transportation, all of which would be less than significant or could be mitigated to a less-than-significant level with standard mitigation. This alternative BMP Update component would be the most useful with successful implementation of one or more of the following: Conservation (thus freeing up supplemental water for more agricultural land), College Lake and Inland Pipeline to CDS, Harkins Slough Recharge Facility Upgrades, or Watsonville Slough with Recharge Basins, all of which would provide additional water for use in the CDS. Without successful implementation of one of those, it would not be technically effective.

In addition to the Inland Pipeline to CDS, the 2014 EIR analyzed underground pipelines associated with the following components:

- Increased Recycled Water Storage at Treatment Plant;
- Harkins Slough Recharge Facilities Upgrade;
- Watsonville Slough with Recharge Basins; and
- Murphy Crossing with Recharge Basins.

2.3 PROPOSED PROJECT

The existing CDS conveys a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz Counties. The proposed F line (approximately 7,850 feet), F1 line (approximately 2,090 feet), F6 line (approximately 3,910 feet), F7 line (approximately 930 feet), and F8 line (approximately 362 feet) pipelines would branch off the existing CDS to provide reclaimed water for agricultural irrigation to an agricultural area along San Andreas Road in Santa Cruz County that currently is on a groundwater supply severely impacted by seawater intrusion. The F Line Project system is composed of approximately 2.9 miles of High Density Polyethylene (HDPE) distribution piping ranging from 10 to 30 inches in diameter and 15 agricultural turnouts designed to provide approximately 2,600 afy of supplemental irrigation water to 1,300 irrigated acres in addition to the existing 5,100-acre service area (CDS). The proposed F line pipelines would connect to the existing CDS located approximately 2,230 feet west of San Andreas Road and 3,200 feet north of Dairy Road, and would

extend north to a point approximately 900 feet northeast of Academy Road (McQuaide Road) and approximately 860 feet northeast of San Andreas Road. The F1 line would connect to the F line approximately 270 feet southwest of San Andreas Road and approximately 1,000 feet south of Sunset Beach Road. The F6 line would connect the F line at San Andreas Road and Sunset Beach Road and would extend to a point approximately 3,300 feet to the west of this intersection. The F7 line would connect to the F6 line located approximately 1,950 feet northeast of San Andreas Road (see Figures 1 and 2).

Aboveground improvements will include 15 agricultural turnouts, combination air release valve enclosures (CARV), and blow-off structures. Agricultural turnouts will consist of aboveground piping and appurtenances. In addition, a concrete manhole riser (approximately 5 feet in diameter) will be placed around the vertical riser of the turnout piping to protect it from vehicles and farm equipment. Aboveground piping will be supported by pipe supports anchored to an on-grade concrete equipment support pad; the pad will be approximately 3 square feet and 1.5 feet thick. Air release valve enclosures will either be located in a below-grade structure (i.e., manhole) or above grade in a steel enclosure (approximately 3 feet in diameter and 3 feet in height). To avoid impacts on the on-farm operations, the air valve enclosure will be located outside the edges of the farm fields. Typically, the air valve enclosure will be located on the edges of adjacent farm access roads. Blow-off structures will be primarily below-grade structures comprised of a manhole with frame and cover at the surface for access. The top of the manhole structures containing the blow-off riser section will be located 6 inches above ground level, with backfilling around the structure to allow for drainage. Where possible, these blow-off manholes will be located outside of the farm fields to avoid conflicts with farm operations.

The CDS is supplied by water from four sources including: (1) recycled water produced at the Recycled Water Facility; (2) Recovered Harkins Slough water produced at the Harkins Slough Managed Aquifer Storage and Recovery Facility; (3) potable water from the City of Watsonville's distribution system; and (4) groundwater produced from two "Blend Wells" (one owned by PV Water, and the other leased by PV Water). Demand in the F line service area would be met by water produced from the facilities described above. Additional storage tanks with a capacity to hold 2 million gallons of recycled water were proposed to be built at the Recycled Water Facility to allow PV Water to produce and distribute an additional 750 afy. In 2018, PV Water constructed the Recycled Water Facility, Phase I Optimization Project, which included a 1.5-million-gallon recycled water storage tank and improvements to the distribution pump station. PV Water can pump as much water as needed from its Blend Wells; however, annual extractions from these two facilities average a combined 370 afy over the past 10 years. PV Water has an agreement with the City of Watsonville not to exceed 2,000 gallons per minute (gpm) or 2,000 afy; however, since the connection to the City of Watsonville's potable system was established in 2006, PV Water has used an average of 590 afy and a maximum of 813 afy, well under the 2,000 afy limit identified in the agreement. As currently proposed, the Project includes the following modifications as compared to the originally approved CDS:

- An additional 2.9 miles of pipeline to be included in the CDS.
- Trench excavations would be slightly wider (6.5 feet wide versus 4 feet wide).

The existing CDS provides a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz Counties. The F Line Project would branch off the existing CDS to provide a supplemental supply for agricultural irrigation to an area that currently is on a groundwater supply, supporting the objectives of the 1999 EIR and 2014 BMP Update. Implementation of the Project would not result in additional quantities of groundwater pumping overall. It would reduce groundwater pumping near the coast, which would reduce seawater intrusion. Depending on the source water, it could increase PV Water's use of potable water supplies and blend wells, which are both supplied from groundwater. Therefore, the project could result in a decrease in groundwater pumping on the coast, but an increase in groundwater pumping inland. Additional details regarding the proposed Project are described below.

2.3.1 Proposed Access, Staging, and Easements

Access to the Project site would be from San Andreas Road, Sunset Beach Road, several existing unnamed roads off of San Andreas Road, and approximately 20-foot-wide unpaved agricultural roads. These roads would provide direct access to the pipeline alignment, temporary construction easements, and staging areas. Construction may require the temporary intermittent closure(s) of San Andreas Road (paved) and Sunset Beach Road (paved) for short periods of time. A traffic control plan would be implemented by the contractor as part of the Project to allow for traffic to continue to flow around the Project site.

Permanent and temporary construction easements would be required, totaling approximately 2.9 miles in length and 75 feet in width in most locations (totaling approximately 27.4 acres). An approximate 15-foot-wide area along the length of the Project would consist of a permanent right-of-way easement for the pipeline (approximately 5.5 acres), consistent with the permanent easement for the CDS. Similarly, a 60-foot-wide temporary construction easement extending the length of the Project would provide approximately 21.9 acres of construction access along the pipeline alignment. One 16-acre potential staging area is proposed to be located adjacent to the southeastern portion of the F6 line alignment east of San Andreas Road; this area was identified based on easy accessibility and available, currently unfarmed open space. Another potential 4-acre staging area is located on the west side of San Andreas Road, on a farmed parcel on the southwest corner of the paved access road to Kitayama Brothers only until August 31, 2020. This area was identified based on easy accessibility and availability, as well as distance from the Project. Storage and staging may also occur along the entire length of the alignment within the identified construction easements. Additional storage sites that may be required for disposal of excavated materials would be determined by the contractor. Environmental analysis and securing landowner approval of such sites would be the responsibility of the contractors, consistent with the 1999 EIR and 2014 BMP Update. The contractor may make temporary surface improvements to the staging areas to accommodate all-weather use during construction. Upon completion of the Project, the staging areas would be restored to pre-Project conditions. The pipeline alignment has relatively easy access as it generally follows existing agricultural roads.

2.3.2 Construction Activities

The pipeline would be constructed primarily using traditional open-cut construction methods. Alternative measures, such as jack-and-bore technology, may be used for road crossings and in the vicinity of jurisdictional waters if required by permitting agencies. The minimum depth of pipeline cover is anticipated to be 5 feet for agricultural lands and 4 feet for all other areas. The maximum depth of pipeline cover is not anticipated to exceed 10 feet. Trench excavations for the pipeline would be approximately 3 to 6.5 feet in width for the majority of the trench segments. Aboveground improvements would include agricultural turnouts, flow isolation valves, air release valve enclosures, and blow-off structures. Agricultural turnouts consist of aboveground piping and appurtenances. In addition, a concrete manhole riser (approximately 5 feet in diameter) would be placed around the vertical riser of the turnout piping to protect it from vehicles and farm equipment. Aboveground piping would be supported by pipe supports anchored to an on-grade concrete equipment support pad; the pad would be approximately 3 square feet and 1.5 feet thick. Air release valve enclosures would either be located in a below-grade structure (i.e., manhole) or above grade in a steel enclosure (approximately 3 feet in diameter and 3 feet in height). To avoid impacts on the on-farm operations, the air valve enclosures would be located outside the edges of the farm fields. Typically, the air valve enclosure would be located on the edges of adjacent farm access roads. Blow-off structures would be primarily below-grade structures comprised of a manhole with frame and cover at the surface for access. The top of the manhole structures containing the blow-off riser section would be located 6 inches above ground level, with backfilling around the structure to allow for

drainage. Where possible, these blow-off manholes would be located outside of the farm fields to avoid conflicts with farm operations.

Bedding and pipe zone material are anticipated to be imported (approximately 8,900 cubic yards). Reuse of native material for trench backfill (above the pipe zone) is anticipated to be acceptable within unimproved areas. Trench backfill (native material) within improved areas should meet the same requirements as for structural fill material and may include imported soil and granular material, native soil material, and controlled low-strength material. Excess material from trench excavation (approximately 10,600 cubic yards) would be disposed of off-site in accordance with federal, state, and local laws and regulations. The contractor would be required to stockpile, segregate, and cover the top 18 inches of topsoil from each individual parcel adjacent to the trench and replace it after the trench has been backfilled.

Construction would be divided into five phases. Construction of the first three phases of the Project is anticipated to generate approximately 5 to 20 daily trips over 18 months. This includes transport of equipment and materials, trips generated by construction managers and personnel, approximately 530 round trips to export 10,600 cubic yards of soil (20-cubic yard haul trucks) and approximately 445 round trips to import 8,900 cubic yards of pipe zone material (assumes 20-cubic yard haul truck). This is assuming soil material would be used as pipe zone material. The use of controlled low-strength material for pipe zone material would reduce quantity estimates for import and export.

Anticipated trench excavations would be in County of Santa Cruz (County) roads, agricultural fields, maintenance yards, and farm roads. There are no anticipated utility relocations. No trees are expected to be disturbed. Although agricultural crops are not anticipated to be planted within the temporary construction easements acquired for the Project, removal of vegetation and other organic matter would be necessary if present. No additional lighting is proposed.

Construction would be performed in phases, which would depend on the acquisition of funding. The Project is divided into five schedules (Schedules A through E). Grant funding for Schedule A has been approved and a schedule has been set for Schedules A, B, and C. Schedule A would include the southern portion of the F line. Schedules B and C would complete the remainder of the F line and the entire F1 line. Schedules D and E would include the F6, F7, and F8 lines and would be constructed at a later date. The construction period for Schedules A, B, and C is anticipated to extend over an 18-month period, with construction expected to begin in January 2020 and be completed by June 2021. Construction would generally occur Monday through Friday, from 7:00 a.m. to 5:00 p.m. There is a potential for occasional work on Saturdays. Table 1 below provides a general construction schedule, including the following phases: mobilization and construction. Site restoration and demobilization will occur at the end of the construction period.

In the event trench dewatering is required, the water would be managed in accordance with federal, state, and local laws and regulations. Water trucks would also be used to control fugitive dust during site preparation, and throughout the construction phases as necessary.

Construction equipment, vehicles, personnel, and materials would be transported to required work areas as necessary. Approximately 5 to 15 workers would be on-site at any time during construction. Equipment use would be planned to optimize on-site staging and reduce off-site traffic and travel. Table 2 below lists anticipated construction equipment and use.

Table 1. Estimated Construction Schedule

Construction Phase	No. of Days	Start Date	Completion Date
Schedule A			
Mobilization	28	January 2020	February 2020
Construction	210	February 2020	December 2020
Schedules B and C			
Construction	150	September 2020	April 2021
Substantial Completion – Punch List Items	40	April 2021	June 2021

Table 2. Estimated Construction Fleet

Equipment Types	Estimated Number in Use	Estimated Maximum Hours Per Day
Off-Road Equipment		
Fusion Machine	1	6
Excavator	2	8
Concrete Truck	2	2
Backhoe	1	4
Loader	1	4
Compactor	2	8
Forklift	1	2
Onsite Haul Truck	1	4
Generator	3	2
Water Truck	1	2
Truck/Trailed to Haul HDPE Pipe	1	2
On-Road Equipment		
1-ton Crew Truck	2	8
½-ton Pickup Truck	4	8
10-Wheel Dump Truck	1	2
Site Delivery Truck	1	2
Semi-Truck Flat Bed	1	2

2.3.3 Stormwater Management

A Stormwater Pollution Prevention Plans (SWPPP) would be prepared as part of the Project by the contractor, and the contractor would be responsible for implementing best management practices, including installation and maintenance of erosion control features. Following the completion of construction, disturbed areas would be stabilized, and topsoil would be replaced in the agricultural fields. Non-agricultural areas disturbed by construction would be revegetated by the contractor in accordance with the approved SWPPP.

2.3.4 Operation and Maintenance

Operation of the Project would not require additional personnel or generate additional trips above existing conditions. Maintenance activities may require access to the pipeline and agricultural turnouts. All maintenance activities would occur within the identified permanent easement and may include excavation to view and repair underground facilities.

2.4 MODIFICATIONS TO MITIGATION MEASURES

2.4.1 Aesthetics

Mitigation Measure 4.9.3-1b (1999 EIR): ~~The PVWMA~~ PV Water will revegetate disturbed natural areas to minimize textural contrasts with the surrounding vegetation using grasses, shrubs and trees typical of the immediately surrounding area.

Mitigation Measure 4.9.3-1c (1999 EIR): ~~The PVWMA~~ PV Water will ensure that its contractors restore the topography of the disturbed areas along the pipeline alignment to their pre-project condition such that short-term construction disturbance does not result in long-term visual impacts.

2.4.2 Agriculture and Forestry Resources

None

2.4.3 Air Quality

Mitigation Measure 4.7.3-1 (1999 EIR): The construction contractor shall implement a dust program that includes the following elements:

- *Water all active construction sites as needed~~at least twice daily~~. Frequency should be based on the type of operation, soil, and wind exposure.*
- *Prohibit all grading activities during periods of high wind (over 15 mph).*
- *Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.*
- *Cover inactive storage piles.*
- *Install wheel washers at the entrance to construction sites for all exiting trucks.*
- ~~*Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites*~~
- ~~*Sweep daily (with water sweepers) all paved access roads, paved parking areas and paved staging areas at construction sites*~~
- *Sweep streets daily (with water sweepers) if visible soil material is carried out from the construction site~~ onto adjacent public streets~~.*
- ~~*Limit area under construction at any one time.*~~
- ~~*Hydroseed or apply (non-toxic) soil binders to inactive construction areas. However, do not apply these measures in operating agricultural fields under cultivation unless requested by the grower*~~

- ~~*Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).*~~
- *Limit traffic on unpaved roads to 15 mph*
- ~~*Replant vegetation in disturbed areas as quickly as possible.*~~
- ~~*Install sandbags or other erosion control measures to prevent silt runoff to public roadways*~~
- *The Contractor will post a publicly visible sign that specifies the telephone number and person to contact at PV Water regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours.*

2.4.4 Biological Resources

Mitigation Measure 4.4.3-1b (1999 EIR): Implement Standard Protective Measures to Maintain Water Quality and Control Erosion and Sedimentation. Standard measures to maintain water quality and to control erosion and sedimentation are recommended:

- *Restrict trenching across all waterways to low-flow periods.*
- ~~*Exclude water from around the section of trench that is within the actively flowing channels. This will further reduce the potential for sediment or other pollutants to enter the waterways and impact downstream resources. The diversion will consist of water pillows, rock, sandbags, or other structural methods deemed most effective by the project Engineer.*~~
- ~~*Place sediment curtains downstream of the construction zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone.*~~
- *Locate spoil sites so they do not drain directly into waterways. If a spoil site drains into a channel, catch basins will be constructed to intercept sediment before it reached the channels. Spoil sites will be graded to reduce the potential for erosion.*
- *Prepare and implement a spill prevention plan for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching* ~~*creek*~~ *drainage channels.*
- *Store equipment and materials away from waterways, outside existing levees or at least 50 feet from waterways, but within the pipeline right-of-way. No equipment or materials shall be deposited within 100 feet of wetlands.*
- *Provide proper and timely maintenance for vehicles and equipment used during construction to reduce the potential for mechanical breakdowns leading to a spill of materials into or around drainages* ~~*creeks*~~*. Maintenance and fueling will be conducted in an area that meets the criteria set forth in the spill prevention plan (i.e. away from the drainages* ~~*creek*~~*).*

~~*Mitigation Measure 4.4.3-2b (1999 EIR): Survey, Consultation and Protection Measures for California red-legged frog. Since potential habitat for the California red-legged frog is present at Corralitos and Salsipuedes creeks, informal consultation with the USFWS was initiated and a site assessment was carried out as part of the field surveys in 1999. Since red-legged frogs are presumed present, reasonable and prudent protection measures outlined in the Programmatic Biological Opinion (FWS 1999) (required by Endangered Species Act) will be carried out for this project.*~~

~~*Mitigation Measure 7.4.3-2c (1999 EIR): Survey, Consultation and Protection Measures for Special Status Wildlife Species. Since the Central Coast steelhead and tidewater goby are known to be present and potential habitat for the California red-legged frog was found as part of the site assessment, reasonable and prudent measures for protection of the California red-legged frog contained in the Biologic Programmatic Opinion for this species shall be implemented if the U.S. Army Corps of Engineers finds that impact to this species is likely. If impacts to the Central Coast steelhead or tidewater goby may occur as part of this project, a formal consultation and Biological Opinion must be prepared for FWS under the Endangered Species Act.*~~

Mitigation Measure 8.4.3-1a (1999 EIR): Avoidance of Wetlands. The crossings of jurisdictional areas ~~*at the Pajaro Rover, McClusky Slough, and Watsonville Slough*~~ *shall be avoided to the extent feasible by project construction, maintaining all facilities outside the jurisdictional area defined by riparian or emergent vegetation.* ~~*Bore and jack, tunneling and directional drill methods shall be used to install the pipeline under creek channels and culverts.*~~ *Trenching shall be limited to existing filled or developed areas, to the extent possible.* ~~*This measure would also avoid impacts to special status species potentially occurring in the waterways (see Impact 8.4.3-2). If complete avoidance is infeasible, implement Measure 8.4.3-1b.*~~

~~*Mitigation Measure 8.4.3-1b (1999 EIR): Implement Standard Protective Measures to Maintain Water Quality and Control Erosion and Sedimentation. Standard measures to maintain water quality and to control erosion and sedimentation are recommended as in Mitigation Measure 4.4.3-1b. This includes trenching across wetlands during low flow periods, excluding water from construction by diversions as feasible, use of sediment curtains, placing spoils outside waterways, preparing and implementing a spill prevention plan, storing equipment and materials outside the wetlands, and revegetating impacted wetland vegetation according to a detailed revegetation plan approved by the Corps and/or CDFG.*~~

~~*Mitigation Measure 8.4.3-1c (1999 EIR): Restore Pajaro River riparian forest, McClusky Slough wetlands, and Watsonville Slough wetlands. The revegetation plan for the project shall include restoration of riparian forest and wetlands that may have been impacted by construction (i.e. jack and bore staging). Revegetation shall include installation of trees and shrubs in a ratio 3:1 to replace lost vegetation, specifications for after-installation care, weed control, and monitoring for a three year period following installation. Wetland restoration shall include salvage of sod and soil, maintenance during construction, reinstallation following the completion of construction, weed control, and monitoring, performance criteria and replacement measures as needed. Revegetation materials shall consist of locally obtained, locally indigenous species.*~~

~~*Mitigation Measure 8.4.3-2c (1999 EIR): Survey, Consultation and Protection Measures for special status wildlife species. As part of the habitat assessment, potential habitat for the California red-legged frog was found to be present at Watsonville Slough. Potential habitat may also be present for Santa Cruz long-toed salamander. Central Coast steelhead, and tidewater goby are present at the Pajaro River, and potential habitat for California red-legged frog was identified here as well. As a result, PVWMA will initiate formal consultation with USFWS and CDFWG if these areas will be impacted.*~~

~~*Protective measures shall be carried out as in Mitigation Measure 4.4.3-2b and 7.4.3-2c, including all reasonable and prudent measures outlined in the Programmatic Biological Opinion for the California red-legged frog (FWS, 1999).*~~

Mitigation Measure BIO-2a (2014 EIR): During project activities, all trash ~~*that may attract predators*~~ *will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.*

~~*Mitigation Measure BIO-2b (2014 EIR): All refueling, maintenance, and staging of equipment and vehicles will occur at least 65 feet from any riparian habitat or water body. The Agency will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the Agency will ensure that the contractor has prepared a plan to allow a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.*~~

~~*Mitigation Measure BIO-2c (2014 EIR): The spread or introduction of invasive exotic plant species will be avoided to the extent practicable. When practicable, invasive exotic plants in the project areas will be removed.*~~

~~*Mitigation Measure BIO-2d (2014 EIR): Prior to any on-site work in areas where special-status species may occur, a qualified biologist will conduct a tailgate training session in which all construction personnel will receive training regarding measures (below) that are to be implemented to avoid environmental impacts. This training will include a presentation of the potential for sensitive species to occur at the site and measures to protect habitat including aquatic habitat and avoid impacts to the species. All personnel working on the site will receive this training, and will sign a sign-in sheet showing they received the training.*~~

~~*Mitigation Measure BIO-2e (2014 EIR): Prior to the commencement of work, the limits of the work area (including haul routes, access ramps, storage areas and material stockpiles) will be clearly marked with orange construction fencing to prevent workers from impacting habitat outside the work area. No work will occur outside the designated marked work areas.*~~

~~*Mitigation Measure BIO-2f (2014 EIR): Each morning before work begins on any components in or within 100 feet of a suitable habitat area (defined as: riparian habitat, USACE jurisdictional wetlands or "other waters" of the U.S., or sensitive habitats identified in subsequent USFWS Biological Opinions and CDFW 1600 Lake and Streambed Alteration Agreements), a qualified monitor will survey the work site and habitat immediately surrounding the active work site for conditions that could impact special-status species, and will remain on-site whenever work is occurring that may adversely impact special-status species and their habitats. No work will be allowed to begin each morning until the monitor has inspected the work site.*~~

~~*Mitigation Measure BIO-2g (2014 EIR): A USFWS-approved biologist or biological monitor will permanently remove from within the project area(s), any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes to the extent practicable.*~~

~~*Mitigation Measure BIO-2h (2014 EIR): Upon locating individuals of special-status species that are dead or injured as a direct result of activities conducted by the City, initial notification will be made to the USFWS's Division of Law Enforcement at (916) 978-4861 (Sacramento) within three working days of its finding. The USFWS Field Office within whose area of responsibility the specimen is recovered will also be notified. Written notification will be made within five calendar days and include the date, time, and location of the carcass, a photograph, cause of death, if known, and any other pertinent information.*~~

Mitigation Measure BIO-2i (2014 EIR): Nesting Bird Surveys. Prior to any project construction activities, the project proponent will take the following steps to avoid direct losses of nests, eggs, and nestlings and indirect impacts to avian breeding success:

- *If construction activities occur only during the non-breeding season, between August 31 and February 1, no surveys will be required.*

- *During the breeding bird season (February 1 through August 31), a qualified biologist will survey construction areas and the surrounding 500-foot buffer ~~in the vicinity of the project site~~ for nesting raptors and 250-foot buffer for all other avian species ~~passerine birds~~ not more than 14 days prior to any ground-disturbing activity or vegetation removal. Surveys will include all potential habitats within 500 feet (for raptors) of activities and all onsite vegetation including bare ground within 250 feet of activities (for all other avian species).*

- ~~*If results are positive for nesting birds,*~~ *If active nests are observed (containing eggs or chicks), avoidance procedures will be adopted by an avian biologist~~, if necessary,~~ on a case-by-case basis. These may include implementation of buffer areas (minimum 50-foot buffer for passerines and 250-foot minimum buffer for raptors) or seasonal avoidance.*

~~*Mitigation Measure BIO-2j (CRT) (2014 EIR): The following measures for avoidance and minimization of adverse impacts to California Red-Legged Frog (Rana draytonii) (CRF) during construction of the BMP projects are those typically employed for construction activities that may result in shortterm impacts to individuals and their habitat. The focus of these measures is on scheduling activities at certain times of year, keeping the disturbance footprint to a minimum, and monitoring. Consultation with the USFWS will be conducted and a Biological Opinion developed for each BMP Update component that requires a USACE Section 404 Wetland Permit. Ongoing and future CRF studies in the project area may result in site-specific conditions that would be integrated into the future project-level BMP component designs, permitting and operations.*~~

Mitigation Measure BIO -1 (New): Pre-Construction Worker Environmental Awareness Training. Prior to any Project construction activities, environmental awareness training will be conducted for on-site construction personnel. The training will explain measures to prevent impacts on nesting birds and special-status species with potential to occur in the Project area. The training will also include a description of these special-status species and their habitat needs, and an explanation of the status of these species and their protection under the Federal Endangered Species Act, California Endangered Species Act, Migratory Bird Treaty Act, and other statutes. A brochure will be provided with color photos of sensitive species as well as a discussion of Project measures.

Mitigation Measure BIO-2 (New): Pre-construction Santa Cruz Long-Toed Salamander Survey. A preconstruction survey for Santa Cruz long-toed salamander shall be conducted within the construction zone immediately prior to ground disturbance. If no individuals are detected during this survey, then construction-related activities may proceed. If Santa Cruz long-toed salamanders are found within the work area, construction activities will be halted and will not resume until the individuals have moved off the construction site on their own volition.

Mitigation Measure BIO-3 (New): Pre-construction California Red-legged Frog Survey. A preconstruction survey for California red-legged frog shall be conducted within the construction zone immediately prior to ground disturbance. If no individuals of these species are detected during these surveys, then construction-related activities may proceed. If CRLF are found, construction will halt, USFWS and CDFW will be notified and the relocation of the individual will be completed with prior approval by USFWS and CDFW.

Mitigation Measure BIO-4 (New): Preconstruction Maternity Roost Bat Surveys. During the breeding season of native bat species in California (April 1 through August 31), a qualified biologist will conduct a focused survey to determine if active maternity roosts of special-status bats are present within 250 feet of the Project area. Should an active maternity roost of a special-status bat species be identified, the roost shall not be disturbed until the roost is vacated, as determined by the biologist.

2.4.5 Cultural Resources

~~*Mitigation Measure CR-1a (2014 EIR): Final pipeline and facility plans shall locate facilities and pipeline alignments away from identified and recorded archaeological sites in each component area based on a site reconnaissance and archaeological investigation conducted by a qualified archaeologist at the time site-specific construction plans are developed. The archaeologist shall identify the areal extent of potential recorded sites, assess potential significance to identified resources, recommend adjustment to siting of improvements, facilities and/or pipeline alignments, if necessary, and provide other recommendations to avoid impacts to identified significant resources. If a significant or potentially significant archaeological or historic resource is identified pursuant to the definitions in the State CEQA Guidelines as identified above, the consulting archaeologist shall develop an appropriate mitigation plan for the cultural resource. Possible mitigation measures for important cultural resources may include monitoring by a qualified archaeologist during construction at identified sensitive sites, documentation and recordation of the resource, recovery and relocation, or stabilization of the resource.*~~

~~*Mitigation Measure CR-1b (2014 EIR): The cultural resource boundaries of potentially significant sites shall be marked as exclusion zones both on ground and on construction maps prior to the commencement of construction activities on component sites. Construction supervisory personnel shall be notified of the existence of cultural resources in each component area and will be required to keep personnel and equipment away from these cultural resources sites. During construction and operational phases, personnel and equipment will be restricted to each surveyed corridor for each component.*~~

Mitigation Measure CR-1c (2014 EIR): Should any as yet undiscovered cultural resources be uncovered at any component site, such as structural features, or unusual amounts of bone or shell, artifacts, ~~human remains,~~ or architectural remains be encountered during any development activities, work ~~will be suspended~~ in the immediate vicinity of the find (within 25 feet [7.6 meters]) must stop until a qualified archaeologist can evaluate the significance of the find. Construction activities may continue in other areas beyond the 25-foot stop work area. ~~and PVWMA staff will be contacted.~~ A qualified professional archaeologist is defined as someone who meets the Secretary of the Interior's Professional Qualifications Standards in archaeology. If the discovery proves significant under the CEQA, additional mitigation may be warranted. ~~shall be retained and will perform any necessary investigations to determine the significance of the find. PVWMA will then implement any mitigation deemed necessary for the recordation and/or protection of the cultural resources. In addition, pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work must be halted and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.~~

Mitigation Measure CUL-1 (New): The discovery of human remains is always a possibility during ground disturbances. State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to California PRC Section 5097.98. The County Coroner must be notified of the find immediately, and all work shall cease in the immediate vicinity of the find. If the human remains are determined to be ancient or likely Native American, the coroner will notify the NAHC, which will designate and notify a Native American Most Likely Descendent (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burials.

2.4.6 Energy

None

2.4.7 Geology and Soils

Mitigation Measure 8.2.3-1a (1999 EIR): All grading and construction shall conform to requirements of the ~~Monterey and~~ Santa Cruz County Grading Ordinance.

Mitigation Measure 8.2.3-1b (1999 EIR): Site grading and construction work areas shall be expose as little new ground surface as possible. Vegetation should be left intact to the extent practical outside of areas supporting agriculture and roadways.

~~Mitigation Measure 8.2.3-1c (1999 EIR): To the extent possible, grading activities in non-cropped areas shall be limited to the period between April 1 and October 31. If dry conditions persist after October 31, one week extensions of grading activities should be obtained from the County Public Works Department. In areas where the soil is tilled, grading activities should be coordinated with local farmers to ensure consistency between their erosion control and farming practices and construction disturbance.~~

Mitigation Measure 8.2.3-1d (1999 EIR): Implement best construction practices at all grading sites, regardless of soil erodibility.

Mitigation Measure 8.2.3-1e (1999 EIR): Upon completion of construction within non-agricultural areas ~~at all sites~~, loose soils shall be removed or spread and all non-agricultural areas shall be re-soiled ~~and reseeded~~ to ensure that a stable soils cover will remain. Re-seeding with an in-kind seed mix shall occur in natural areas affected by the Project.

Mitigation Measure 8.2.3-1f (1999 EIR): ~~PVWMA~~Contractor should prepare and implement an inspection and maintenance program during construction for the right-of-way and all facility sites per the SWPPP. The plan should include routine inspection plans and reporting, and prescriptive methods for correcting erosion or soil instability problems as outlined in the project SWPPP.

Mitigation Measure 8.2.3-4 (1999 EIR): ~~Conduct soil engineering investigations of the proposed pipeline alignment and pumping facilities prior to the final design and~~ The Project shall implement design recommendations from the soil engineering investigations conducted in 2006. ~~The investigations will specify hazards related to corrosion, weak soils and settlement, including differential settlement.~~ The recommendations of the~~an~~ engineering geologist shall be incorporated into the design and specifications and shall be implemented by the construction contractor. The construction manager shall conduct inspections and verify ~~certify~~ that all applicable design criteria have been met. While these measures would not ensure that some damage to the facilities would not occur, it would ensure that design standards have been met and the hazards have been reduced to an acceptable level of risk. Therefore, the impact would be further reduced to a less than significant level.

Mitigation Measure 8.2.3-5 (1999 EIR): ~~Conduct geologic investigations of the proposed pipeline alignment and pumping facilities prior to the final design and~~ The Project shall implement design recommendations from the geologic investigations conducted in 2006. ~~The investigations should specify hazards related to ground movements and co-seismic efforts, especially liquefaction.~~ The recommendations of the~~an~~ engineering geologist shall be incorporated into the design and specifications and shall be implemented by the construction contractor. The construction manager shall conduct inspections and verify~~certify~~ that all applicable design criteria have been met. While these measures would not ensure that damage to the facilities would not occur, it would ensure that the hazards have been reduced to an acceptable level of risk, and, therefore, the impact would be reduced to a less than significant level.

Mitigation Measure GEO-1 (New): Within agricultural areas, the contractor will be required to stockpile, segregate, and cover the top 18 inches of topsoil from each individual parcel adjacent to the trench and

replace it after the trench has been backfilled. Topsoil shall be stockpiled separate from subsoils, and covered to prevent topsoil loss and erosion by wind or rain. Topsoil shall be replaced within the top 18 inches of fill material to be replaced following pipe installation.

2.4.8 Greenhouse Gas Emissions

None

2.4.9 Hazards and Hazardous Materials

Mitigation Measure HM-1 (2014 EIR): ~~Prior to initiation of earthwork activities, PVWMA shall perform soil testing on agricultural sites proposed for development and analytically test for pesticide residuals and pesticide-related metals arsenic, lead, and mercury. If contamination is identified in the soil samples above applicable levels, PVWMA~~ Contractor shall prepare a Site Management Plan (SMP) to establish protocols/guidelines for ~~the contractor~~ construction in potentially contaminated agricultural soils ~~the contractor~~ including: identification of appropriate health and safety measures while working in contaminated areas; soil reuse; handling, and disposal of any contaminated soils; and agency notification requirements. The SMP shall include appropriate protection measures and personal protective equipment including, but not limited to, worker access to Material Safety Data Sheets, wearing gloves, and controlling visible dust. ~~The SMP shall be subject to the review and approval of the appropriate regulatory agency.~~

Mitigation Measure 4.6.3-3a (1999 EIR): Construction trenches shall be covered by steel trench plates to allow access to driveways.

Mitigation Measure 4.6.3-3b (1999 EIR): To minimize disruption of emergency vehicle access, contractors will work with affected jurisdictions in ~~(~~Santa Cruz ~~or Monterey~~ County ~~or City of Watsonville)~~ to identify detours during construction as needed.

Mitigation Measure 4.6.3-3c (1999 EIR): The contractor shall contact ~~P~~police, fire, and emergency services ~~shall be notified of~~ regarding the timing, location, and duration of construction activities and the locations of detours and lane closures.

2.4.10 Hydrology and Water Quality

~~Mitigation Measure 4.3.3-1 (1999 EIR): Employ construction storm water quality management practices.~~

~~The agency shall prepare a Storm Water Pollution Prevention Plan as part of the construction activities National Pollutant Discharge Elimination System (NPDES) storm water permit required by the RWQCB. At a minimum, this plan shall include the following requirements:~~

~~1. Plan excavation and grading activities for only the dry season (April 15 to October 31) to the extent possible. This reduces the chance of severe erosion from intense rainfall and surface runoff, as well as the potential for soil saturation in swale areas.~~

~~2. If excavation occurs during the rainy season, storm runoff from the construction area shall be regulated by temporary on-site silt traps and/or basins with multiple discharge points to natural drainages and energy dissipaters. Stockpiles of loose material shall be covered and runoff all be diverted away from exposed soil material. If work is stopped due to rains, a positive grading away from slopes shall be provided to carry the surface runoff to areas where flow can be controlled, such as the temporary silt basins. Sediment basin/traps shall be located and operated to prevent off site sediment transport. Any~~

~~*trapped sediment shall be removed from the basin or trap and placed at a suitable location on-site away from concentrated flows, or removed to an approved disposal site.*~~

~~*3. Temporary erosion control measures shall be provided until perennial revegetation or landscaping is established and can prevent discharge of sediment into nearby waterways. For construction within 500 feet of a water body, straw bales shall be placed upstream adjacent to the water body.*~~

~~*4. After completion of grading, erosion protection shall be provided on all cut and fill slopes. Revegetation shall be facilitated by mulching, hydroseeding or other methods, and should be initiated as soon as possible after completion of grading, and prior to the onset of the rainy season (by November 1).*~~

~~*5. Permanent revegetation/landscaping shall emphasize drought-tolerant perennial ground coverings, shrubs, and trees, to improve the probability of slope and soil stabilization without adverse impacts to slope stability due to irrigation infiltration and long-term root development.*~~

~~*6. BMPs selected and implemented for the project shall be in place and operational prior to the onset of major earthwork on the site. The construction phase facilities shall be maintained regularly and cleared of accumulated sediment as necessary.*~~

~~*7. Hazardous materials such as fuels and solvents used on the construction sites shall be stored in covered containers and protected from vandalism. A stockpile of spill cleanup materials shall be readily available at all construction sites. Employees shall be trained in spill prevention and cleanup and individuals shall be designated as responsible for prevention and cleanup activities.*~~

~~*8. Other measures as described in Mitigation Measure 4.4.3-1 b – Implement Standard Protective Measures to Maintain Water Quality and Control Erosion and Sedimentation.*~~

~~*Mitigation Measure 4.4.3-1b (1999 EIR): Implement Standard Protective Measures to Maintain Water Quality and Control Erosion and Sedimentation: Standard measures to maintain water quality and to control erosion and sedimentation are recommended:*~~

~~*• Restrict trenching across all waterways to low-flow periods.*~~

~~*• Exclude water from around the section of trench that is within the actively flowing channels. This will further reduce the potential for sediment or other pollutants to enter the waterways and impact downstream resources. The diversion will consist of water pillows, rock, sandbags, or other structural methods deemed most effective by the project Engineer.*~~

~~*• Place sediment curtains downstream of the construction zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone.*~~

~~*• Locate spoil sites so they do not drain directly into the waterways. If a spoil site drains into a channel, catch basins will be constructed to intercept sediment before it reaches the channels. Spoil sites will be graded to reduce the potential for erosion.*~~

~~*• Prepare and implement a spill prevention plan for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching the creek channels.*~~

~~*• Store equipment and materials away from the waterways, outside existing levees or at least 50 feet from waterways, but within the pipeline right-of-way. No equipment or materials shall be deposited within 100 feet of wetlands.*~~

~~*• Provide proper and timely maintenance for vehicles and equipment used during construction to reduce the potential for mechanical breakdowns leading to a spill of materials into or around the creeks. Maintenance and fueling will be conducted in an area that meets the criteria set forth in the spill prevention plan (i.e., away from the creeks).*~~

Mitigation Measure 4.3.3-2 (1999 EIR): The contractor would be required to ~~O~~obtain an NPDES permit for construction dewatering if required by the RWQCB and implement conditions of the permit. An NPDES permit will be required from the RWQCB for all discharges to waters of the State for construction dewatering. Discharges must meet water quality objectives specified by the RWQCB ~~in the Basin Management Plan as described in Section 3.3~~. The RWQCB may require certain conditions of the permit, such as treatment of the flows prior to discharge.

Mitigation Measure HYD-1 (New): Employ construction storm water quality best management practices.

PV Water shall require contractors to develop a SWPPP in compliance with the 2009-0009 DWQ Construction General Permit requirements for construction of proposed pipeline facilities, as required by the State Water Resources Control Board. The objectives of the SWPPP are to identify pollutant sources that may affect the quality of stormwater discharge and to identify, assign, and implement control measures and management practices to reduce pollutants in stormwater discharges. The SWPPP for this proposed action would include the implementation, at a minimum, of the following elements:

Source Identification: The SWPPP shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or which may result in non-storm water discharges from the facility.

- *a. A topographic map (or other acceptable map if a topographic map is unavailable), extending 0.25 mile beyond the property boundaries of the facility showing: the pipeline alignment, surface water bodies (including springs and wells), and the discharge point(s) where storm water discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.*
- *b. A site map showing the following:*
    - *1) Storm water conveyance, drainage, and discharge structures;*
    - *2) An outline of the storm water drainage areas for each storm water discharge point;*
    - *3) Paved areas and buildings;*
    - *4) Areas of actual or potential pollutant contact with storm water or release to storm water, including but not limited to outdoor storage and process areas; material loading, unloading, and access areas; and waste treatment, storage, and disposal areas;*
    - *5) Location of existing storm water structural control measures (i.e., berms, coverings, etc.);*
    - *6) Surface water locations, including springs and wetlands; and*
    - *7) Vehicle service areas.*
- *c. A narrative description of the following:*
    - *1) Pipeline alignment;*
    - *2) Materials, equipment, and vehicle management practices employed to minimize contact of significant materials of concern with storm water discharges;*
    - *3) Material storage, loading, unloading, and access areas;*

4) *Existing structural and non-structural control measures (if any) to reduce pollutants in storm water discharges; and*

5) *Methods of on-site storage and disposal of significant materials.*

d. *A list of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities.*

2.4.11 Land Use and Planning

Mitigation Measure 4.1.3-1 (1999 EIR): PV Water will provide ~~A~~advance notification of construction ~~activities should be provided~~ to all property owners, residents, and businesses with property contiguous to the planned ~~in the vicinity of~~ construction areas.

2.4.12 Mineral Resources

None

2.4.13 Noise

Construction Noise Minimization Practices (2014 EIR):

- *Contractors shall comply with Santa Cruz County~~all local~~ sound control and noise level rules and regulations, and shall notify residents and businesses within ¼ mile of the construction site prior to commencing construction activities.*
- *Equipment and trucks used for construction activities shall utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts.*
- *Impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for construction activities shall be hydraulically- or electrically-powered whenever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used (such as drilling rather than impact equipment) whenever feasible.*
- *Stationary noise and vibration sources shall be located as far from sensitive receptors as possible. If they must be located near existing receptors, they shall be adequately muffled.*
- *Temporary walls may be erected at some locations to reduce noise impacts to residences adjacent to construction sites.*
- *Construction activities generating noise shall be limited to the hours of 8 a.m. to 5 p.m., Monday through Saturday.*

2.4.14 Population and Housing

None

2.4.15 Public Services

None

2.4.16 Recreation

Mitigation Measure 4.6.3-2b (1999 EIR): The construction contractor shall prepare traffic safety and control plans to show specific methods for maintaining traffic flows. This shall include roadway locations where special trenching techniques would be used to minimize impacts to traffic flow and operations~~, and rail operations~~. The traffic control plan shall be reviewed for appropriateness and approved by ~~Caltrans and~~ the ~~governing~~ Santa Cruz County Public Works Department~~s~~.

Mitigation Measure 4.6.3-4 (1999 EIR): Conduct a preconstruction survey of road conditions on key access routes to the project site. The pavement conditions of local streets judged to be in good condition for use by heavy trucks traffic will be monitored. Roads damaged by construction shall be repaired to a condition equal to, or better than, that which existing prior to construction activity.

Mitigation Measure 4.6.3-5a (1999 EIR): The traffic control plans prepared by the contractor (see Mitigation Measure 4.6.3-2b) shall include recommended detours for bicyclists.

Mitigation Measure 4.6.3-5b (1999 EIR): The contractor-shall provide advanced public notification of construction activity and roadway/access closures.

2.4.17 Transportation

Mitigation Measures 4.6.3-1a (1999 EIR): Schedule truck trips outside of peak commute hours to the extent possible.

Mitigation Measures 4.6.3-1b (1999 EIR): Use haul routes that minimize truck traffic on local roadways to the extent possible.

Mitigation Measure 4.6.3-2a (1999 EIR): Limit construction hours to off-peak traffic periods on commute streets to the extent possible.

Mitigation Measure 4.6.3-2b (1999 EIR): The construction contractor shall prepare traffic safety and control plans as required by the Santa Cruz County governing Public Works Department to show specific methods for maintaining traffic flows. This shall include identifying roadway locations where special trenching techniques would be used to minimize impacts to traffic flow and operations~~, and rail operations~~. The traffic control plan shall be reviewed for appropriateness, and approved by ~~Caltrans and~~ the Santa Cruz County~~governing~~ Public Works Department~~s~~.

Mitigation Measure 4.6.3-5b (1999 EIR): The contractor-shall provide advanced public notification of construction activity and roadway/access closures.

Mitigation Measure TR-1 (2014 EIR): Conduct a preconstruction survey of road conditions on key access routes to the project sites (e.g., San Andreas Road). The pavement conditions of local streets judged to be in good condition for use by heavy truck traffic shall be monitored. Roads damaged by construction shall be repaired to a structural condition equal to, or better than, that which existed prior to construction activity.

2.4.18 Tribal Cultural Resources

None

2.4.19 Utilities and Service Systems

Mitigation Measure 4.8.2-1 (1999 EIR): A detailed study identifying utilities along the proposed alignment ~~will be done~~was completed during the pre-design stages of the project. The following mitigations are required for segments identified in final design as having potential conflict with significant utilities.

a. *Utility excavations and encroachment permits would be required from the appropriate agencies, including the Public Works Departments of Santa Cruz County and public and private utilities~~and Monterey Counties, Pacific Bell, U.S. Sprint, and PG&E, City of Watsonville, Caltrans, and UPRR~~. These permits include measures to minimize utility disruption. ~~PVWMA~~ PV Water and its contractors would comply with permit conditions. Permit requirements would be included in construction contract specifications.*

b. *Utility locations would be verified through field survey (potholing) and use of an underground locating service.*

c. ~~*A detailed engineering and construction plan would be prepared as part of the design plans and specifications. This*~~ *The construction plans should include procedures of excavation, support and fill of areas around utility cables and pipes. All affected utility services would be notified of ~~PVWMA~~PV Water's construction plans and schedule. Arrangements would be made with these entities regarding protection, relocation, or temporary disconnection of services.*

~~*d. In areas where the pipeline would parallel wastewater mains, engineering and construction plans will include trench wall support measures to guard against trench wall failure and possible resulting loss of structural support for the wastewater main.*~~

e. *Residents and businesses in the project area would be notified by the contractor in writing of planned utility service disruption 2 to 4 days in advance in conformance with County and State standards.*

Mitigation Measure 8.3.3-4 (1999 EIR): See Mitigation Measure 6.3.3-5 (1999 EIR). Avoid construction impacts to wells. The ~~precise~~ well locations shall be identified ~~in preconstruction surveys~~ on the design drawings, and any well not clearly visible in the field shall be marked in the field for avoidance. ~~The pipeline construction trench, material stockpile areas and soil excavation stockpiles shall be designated in the construction plans and specifications to specifically avoid impacting the well and access to the well~~.

Mitigation Measure ES-2 (2014 EIR): ~~PVWMA~~PV Water shall include in its construction specifications requirement for the contractor to provide plans for recovering, reusing, and recycling construction, demolition, and excavation wastes and providing for composting of plant material, where feasible.

2.4.20 Wildfire

None

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CHAPTER 3. IMPACT ANALYSIS

The 1999 EIR evaluated the following environmental issues: land use and planning, agricultural resources, geology, soils and seismicity, hydrology and water quality, biological resources, cultural resources, traffic and circulation, air quality, socioeconomics, public services, utilities and service systems, aesthetics, and recreational resources. The 2014 EIR evaluated the following environmental issues: aesthetic resources; agriculture and land use; air quality and GHG; biological resources; cultural resources; energy, utilities, and services; geology and soils; hazards and hazardous materials; surface water, groundwater, and water quality; noise and vibration; and transportation and traffic. These issues, and all other issues areas required to be evaluated under CEQA, have been reevaluated in this addendum for the proposed extensions to the pipeline alignment. This evaluation determines whether the Project would result in any new significant impacts or substantially more severe impacts than those identified in the 1999 EIR and 2014 EIR.

3.1 AESTHETICS

Aesthetics resources were discussed under Section 8.9, Visual and Recreation, in the 1999 EIR and Section 3.1, Aesthetic Resources, in the 2014 EIR.

3.1.1 Environmental Setting

Section 8.9 of the 1999 EIR and Section 3.1 of the 2014 EIR analyzed potential aesthetic impacts associated with the CDS. The Project site is located adjacent to existing paved roads and agricultural fields and roads, proximate to the agricultural processing facilities, scattered residences, and agricultural accessory structures. The Project site is visible from the following vantage points: San Andreas Road (adjacent) and Sunset Beach Road (adjacent). Highway 1 is approximately 1.6 miles to the east. This section of Highway 1 is a designated scenic road in the County of Monterey General Plan and Local Coastal Program (LCP) and is eligible for official State Scenic Highway designation by the California Department of Transportation (Caltrans). Because of the distance, there are no views of the Project area from Highway 1. The general area, which contains expansive croplands and little urban development, exhibits a rural visual landscape. Existing agricultural operations in the area often include heavy equipment, trucks, and vehicles at agricultural sites.

3.1.2 Impacts and Mitigation

a) Would the Project have a substantial adverse effect on a scenic vista? ***Less-than-Significant Impact.***

For CEQA purposes, a scenic vista is generally defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. The Project is proposed in an agricultural area of Santa Cruz County that is identified in the Santa Cruz County General Plan as a scenic area.[1] Implementation of the proposed Project would result in the construction of an underground pipeline with 15 aboveground turnouts and air valves. The turnouts would have permanent visual effects; however, they will be similar to other agricultural turnouts throughout the area which are part of the visual landscape of active agricultural operations. Because the aboveground Project facilities will not change the visual, agricultural nature of the surrounding area, this impact would be less than significant.

[1] County of Santa Cruz. 2019. Santa Cruz County GISWeb. Available online at: https://gis.santacruzcounty.us/gisweb/. Accessed August 14, 2019.

b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? ***No Impact.***

Highway 1 is identified as an eligible state scenic highway[2] and as a designated scenic road in Policy 5.10.10 of the Santa Cruz County General Plan/LCP. Similar to the pipeline projects assessed in the 1999 EIR and 2014 EIR, pipeline construction would temporarily tear up agricultural roadways and remove crops along the alignment. No native vegetation or trees would be removed. The landscape is relatively flat, and the Project would not damage natural landforms such as rock outcroppings. This would be a temporary impact, since cropping would be allowed to occur on agricultural lands within the alignment following installation of the pipeline. Highway 1 is located approximately 1.6 miles east of the project and views from Highway 1 are extremely limited. For this reason, the construction disturbance for the pipeline is considered a less-than-significant impact. The following mitigation measures recommended in the 1999 EIR would further reduce this less-than-significant impact.

c) Would the Project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? ***Less-than-Significant Impact.***

The Project is proposed in an agricultural area of Santa Cruz County. Public views include views from San Andreas Road and Sunset Beach Road, which carry tourist traffic as well as agricultural traffic. Implementation of the proposed Project would result in the construction of an underground pipeline with 15 aboveground turnouts and air valves. Permanent visual effects would occur from the agricultural turnouts. These will be similar to other agricultural turnouts throughout the area that are part of the visual landscape of active agricultural operations. Because the visual nature of the turnouts would be similar to existing conditions, this impact would be less than significant.

Similar to the pipeline projects assessed in the 1999 EIR and 2014 EIR, pipeline construction would temporarily tear up agricultural roadways and remove crops along the alignment. No native vegetation or trees would be removed. This would be a temporary impact, since cropping would be allowed to occur on agricultural lands within the alignment following installation of the pipeline. For this reason, the construction disturbance for the pipeline is considered a less-than-significant impact. The following mitigation measures recommended in the 1999 EIR would further reduce this less-than-significant impact.

Impact 8.9.3-1 (1999 EIR): Installation of the coastal distribution system expansion project lateral lines would disturb roadways and remove crops and vegetation, which would temporarily alter the visual landscape. Less than Significant.

Mitigation Measure 4.9.3-1b (1999 EIR): ~~The PVWMA~~PV Water will revegetate disturbed natural areas to minimize textural contrasts with the surrounding vegetation using grasses, shrubs and trees typical of the immediately surrounding area.

Mitigation Measure 4.9.3-1c (1999 EIR): ~~The PVWMA~~PV Water will ensure that its contractors restore the topography of the disturbed areas along the pipeline alignment to their pre-project condition such that short-term construction disturbance does not result in long-term visual impacts.

[2] California Department of Transportation (Caltrans). 2017. *List of Eligible and Designated State Scenic Highways (excel).* Available online at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed August 22, 2019.

d) Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ***No Impact.***

Implementation of the proposed Project would result in the construction of an underground pipeline with 15 aboveground agricultural turnouts. There would be no lighting or glare associated with the turnouts; therefore, the Project would not result in any permanent increase in light or glare. Similar to the pipeline projects assessed in the 1999 EIR and 2014 EIR, the Project would not result in a source of light or glare. No impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to visual and aesthetics resources than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.2 AGRICULTURE AND FORESTRY RESOURCES

Agricultural resources were discussed under Section 8.1, Land Use and Planning, and Section, 8.2, Geology, Soils and Seismicity, in the 1999 EIR and Section 3.2, Agriculture and Land Use, in the 2014 EIR. The proposed Project would construct underground pipelines through lands designated as Prime Farmland or Unique Farmland.

3.2.1 Environmental Setting

The Project is located in an agricultural area of Santa Cruz County that includes Prime Farmland and Unique Farmland. There are a variety of crops grown in the Pajaro Valley area, including vegetable row crops, blackberries, strawberries, apples, and cut flowers. The predominate crop types grown in the delivered water service area include strawberries, vegetable row crops, and cut flowers.

3.2.2 Impacts and Mitigation

a) Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use? ***No Impact.***

The 1999 EIR determined that the CDS pipelines would not result in a permanent conversion of agricultural land because the pipelines would be located underground, and agricultural production could resume within the pipeline alignments following installation. The 2014 EIR determined that the CDS would not be inconsistent with Santa Cruz County General Plan/LCP policies that prohibit conversion of agricultural lands.

The Project would result in temporary impacts to both Prime Farmland and Unique Farmland during pipeline construction. The proposed Project would not result in a loss or conversion of agricultural lands (similar to the projects analyzed in the 1999 EIR) because aboveground structures are limited to piping connections, agricultural turnouts, air release valve enclosures, blow-off structures, and manhole risers. The components would serve the agricultural irrigation system, and the landowner would continue crop production over the pipeline following completion of the Project. Pipelines would be placed at least 5 feet underground in agricultural areas. The contractor would be required to stockpile, segregate, and cover the top 18 inches of topsoil from each individual parcel adjacent to the trench and replace it after the trench has been backfilled. To avoid impacts on farm operations, all aboveground structures would be located outside of farm fields to the extent possible.

Construction of the proposed pipeline facilities would result in the temporary loss of the opportunity for growing crops on soils that are classified as having capability with few restrictions. Following construction, the soils would be replaced. No loss of fertility or key characteristics of the soil for agriculture would be expected to result. The loss of production would be of short duration, removing the soils from agricultural production for part of the growing season. In the long term, the soils could be returned to agricultural production with only a few restrictions. Such restrictions might include limitation on deep tilling or planting with orchards. Because a wide variety of cropping choices are available for these soils, and the Project would not result in the permanent conversion of agricultural lands, no impact would occur.

b) Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract? ***Less-than-Significant Impact.***

The proposed Project would not conflict with existing zoning for agricultural use or Williamson Act lands (similar to the projects analyzed in the 1999 EIR and 2014 EIR) because aboveground structures are limited to piping connections, agricultural turnouts, air release valve enclosures, blow-off structures, and manhole risers, and all aboveground structures would be located outside of farm fields to the extent possible. The components would serve the agricultural irrigation system, and the landowners would continue crop production over the pipeline following completion of the Project.

As discussed in the 1999 EIR, construction of pipelines through agricultural land would result in short-term disruption of agricultural operations. Cropping could resume within the pipeline alignments following installation. This temporary impact would be less than significant. Mitigation Measure GEO-1, requiring the contractor to stockpile and preserve the top 18 inches of topsoil would further reduce this less-than-significant impact.

Impact 8.1.3-1 (1999 EIR): Construction of the proposed coastal distribution system could result in short-term disturbance of adjacent land uses. Less than Significant

In addition, the use of supplemental irrigation water would support agriculture in the Pajaro Valley and coastal areas, help augment natural groundwater recharge, help to halt seawater intrusion, and support goals to provide a sustainable water supply for agricultural use.

c) Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? ***No Impact.***

As identified in the 2014 EIR, there are no designated forest lands, lands zoned Timberland Preserve, or timberland located within the vicinity of any of the BMP Update components. No impact would occur.

d) Would the Project result in the loss of forest land or conversion of forest land to non-forest use? ***No Impact.***

As identified in the 2014 EIR, there are no designated forest lands or timberland located within the vicinity of any of the BMP Update components. No impact would occur.

e) Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? ***No Impact.***

As identified in the 1999 EIR and 2014 EIR, portions of the delivered water service area in the CDS area are currently experiencing seawater intrusion, and the area of basin intrusion is increasing annually. The substitution of pumped groundwater with water delivered by the CDS for irrigation would in part reduce the magnitude of overdraft of the groundwater basin near the coast and is therefore a beneficial impact on groundwater quality of flow. As the Project would reduce pumping in the coastal area, it would contribute substantially to reduction of seawater intrusion.

The proposed expansion of the CDS would increase the delivered water service area by 1,300 irrigated acres. The supplemental water that would be conveyed by the Project would support agricultural activities and further decrease groundwater pumping in the coastal area. No impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to agricultural or forest resources than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.3 AIR QUALITY

Air Quality was discussed in Section 8.7, Air Quality, of the 1999 EIR and Section 3.3, Air Quality and Greenhouse Gas, of the 2014 EIR.

3.3.1 Environmental Setting

The Project area is located within the North Central Coast Air Basin (NCCAB). The NCCAB is comprised of Monterey, Santa Cruz, and San Benito Counties. PV Water lies within the northern portion of the NCCAB. The PV Water service area is bounded by the Santa Cruz range to the north and northeast, the Pacific Ocean to the west, and the Salinas Valley to the south.

Criteria Pollutants and Human Health. For the protection of public health and welfare, the Federal Clean Air Act (FCAA) requires the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants because the EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of an air pollutant that can be present in ambient air without harm to the public's health. Within the NCCAB, the air pollutants of primary concern, with regard to human health, include ozone (O_3) and particulate matter (PM).

Ambient Air Quality. Existing air quality concerns within the NCCAB are primarily related to increases of regional criteria air pollutants (i.e., O_3 and PM) and exposure of sensitive receptors to toxic air contaminants and odors. The Monterey Bay Air Resources District (MBARD) is the regional agency empowered to regulate air pollution emissions from stationary sources in the NCCAB. MBARD regulates air quality through its permit authority over most types of stationary emission sources and through its planning and review activities. MBARD operates air quality monitoring stations that provide information on ambient concentrations of criteria air pollutants. The Salinas station is located at East Laurel Drive in Salinas and the Santa Cruz station is located at 2544 Soquel Avenue in Santa Cruz.

Attainment Status for Criteria Air Pollutants. Portions of the air basin (Pinnacles and Hollister) are in nonattainment for the State 8-hour O_3 standard and PM 10 micrometers or less in diameter (PM_{10}); however, no exceedance of federal or state ambient air quality standards (AAQS) for O_3 have been

measured at the Soquel and Salinas monitoring stations over since 2005.[3] The NCCAB is in nonattainment of state O_3 and PM_{10} standards. The NCCAB is in attainment or unclassified for national standards. The basin is in nonattainment for inhalable particulate matter (PM_{10}).[4]

Sensitive Receptors. Scattered residences are located on San Andreas Road and an unnamed agricultural road off San Andreas Road adjacent to the proposed Project. These residences are located adjacent to existing agricultural fields and proximate to large agricultural processing facilities. These residences are considered sensitive receptors; however, they are currently subjected to dust, odors, and other conditions present within agriculturally dominant areas.

3.3.2 Impacts and Mitigation

Section 8.7 of the 1999 EIR analyzed potential air quality impacts associated with the CDS. The 1999 EIR identified a potentially significant construction-related impact resulting from PM_{10} emissions. This impact was mitigated to less than significant by standard fugitive dust control measures.

a) Would the Project conflict with or obstruct implementation of the applicable air quality plan? ***No Impact.***

The Project would produce short-term, temporary air quality admissions during construction, and would adhere to all requirements of the MBARD. Therefore, the Project would not conflict with or obstruct implementation of an applicable air quality plan, and no impact would occur.

b) Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? ***Less-than-Significant Impact.***

The 1999 EIR identified a potentially significant construction-related impact resulting from PM_{10} emissions. This impact was mitigated to less than significant by standard fugitive dust control measures.

Site-specific air quality impacts relate primarily to combustion emissions from use of construction equipment and fugitive dust emissions from earth movement and vehicle travel over unpaved surfaces during construction of the Project components. Due to the short-term nature of the Project, significant health risk impacts are not anticipated from exposing sensitive receptors to substantial pollutant concentrations (i.e., dust or toxic air contaminant emissions, such as diesel exhaust or acrolein).

Project construction, including site grading and excavation activities, would generate fugitive dust and would potentially expose sensitive receptors to substantial pollutant concentrations. In addition, adjacent agricultural crops could be adversely affected by fugitive dust coating, which could be injurious to plants, particularly seedlings and plants in their early growth stages.

A California Emissions Estimator Model (CalEEMod) analysis of PV Water's K1 Pipeline Project[5] determined that construction of that 1.4-mile pipeline disturbing approximately 14 acres would not

[3] Monterey Bay Air Resources District (MBARD). 2017. *2012-2015 Air Quality Management Plan.* Available online at: http://www.mbard.org/files/6632732f5/2012-2015-AQMP_FINAL.pdf. Accessed August 15, 2019.

[4] Monterey Bay Air Resources District (MBARD). 2019. *Board of Directors Meeting Minutes*. February 20, 2019. Available online at: http://www.mbard.org/files/3185652e4/8wbod32019.pdf. Accessed August 15, 2019.

[5] Pajaro Valley Water Management Agency (PV Water). 2015. *K1 Pipeline Project Local Water Supply & Distribution Project EIR Addendum.* Available online at: https://www.pvwater.org/images/board-and-committees/board_of_directors_assets/2015_bod_agendas_packets/07_22_15_K1_Addendum_compiled_FIN.pdf. Accessed August 14, 2019.

generate any criteria air pollutant in excess of MBARD thresholds, and would generate PM_{10} emissions of approximately 2.58 pounds per day, less than 4% of the MBARD threshold of 82 pounds per day. The proposed Project would construct approximately 2.9 miles, or approximately twice the length of, irrigation pipeline. This would not generate PM_{10} emissions in excess of the MBARD threshold of 82 pounds per day; therefore, this impact would be less than significant.

The effectiveness of dust control measures listed below in Mitigation Measure 4.7.3-1 (1999 EIR) in reducing PM_{10} emissions is approximately 55% (for watering active construction areas) to 90% (for covering haul trucks and inactive storage piles).[6] Implementation of these measures would be expected to further reduce PM_{10} emissions that are already below the threshold of 82 pounds per day. Mitigation Measure AQ-1 (2014 EIR) has been modified to address the specific conditions of the Project site (agricultural crops) while minimizing dust generation during trenching and construction activities.

Impact AQ-1 (2014 EIR): Implementation of the Project ~~BMP Update components~~ would temporarily generate criteria air pollutants, particularly PM10, and may expose sensitive receptors to substantial pollutant emissions during construction. This is a ~~potentially~~ less-than-significant impact. With mitigation measures identified in this EIR, the impact would be further reduced ~~to a less-than-significant level~~.

Mitigation Measure 4.7.3-1 (1999 EIR): The construction contractor shall implement a dust program that includes the following elements:

- *Water all active construction sites as needed~~at least twice daily~~. Frequency should be based on the type of operation, soil, and wind exposure.*
- *Prohibit all grading activities during periods of high wind (over 15 mph).*
- *Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.*
- *Cover inactive storage piles.*
- *Install wheel washers at the entrance to construction sites for all exiting trucks.*
- ~~*Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites*~~
- ~~*Sweep daily (with water sweepers) all paved access roads, paved parking areas and paved staging areas at construction sites*~~
- *Sweep streets daily (with water sweepers) if visible soil material is carried out from the construction site~~onto adjacent public streets~~.*
- ~~*Hydroseed or apply (non-toxic) soil binders to inactive construction areas. However, do not apply these measures in operating agricultural fields under cultivation unless requested by the grower*~~
- ~~*Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).*~~
- *Limit traffic on unpaved roads to 15 mph*
- ~~*Replant vegetation in disturbed areas as quickly as possible.*~~
- ~~*Install sandbags or other erosion control measures to prevent silt runoff to public roadways*~~

[6] Monterey Bay Unified Air Pollution Control District. 2008. *Air Quality Management Plan*. August 2008

- *The Contractor shall post a publicly visible sign that specifies the telephone number and person to contact at PV Water regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours.*

In addition to PM_{10}, the 1999 EIR identified a less-than-significant impact due to increased vehicle emissions during road closures or detours. Similar to the CDS project analyzed in the 1999 EIR, the proposed Project would involve crossing roadways. Roadways would be maintained to allow one-lane passage at all times. For one-lane or narrow roadways, construction would be completed by closing the road for the shortest period of time, and traffic control plans submitted by the contractor would ensure minimal lane closures and detours. Vehicular emissions due to construction of the Project would be temporarily increased from autos taking detours or queuing on narrow roadways. However, increased emissions directly caused by lane closures would not be likely to exceed MBARD significance criteria of 150 pounds per day of O_3 precursors (reactive organic gas [ROG] or nitrogen oxide [Nox]) or 550 pounds per day of carbon monoxide (CO). The Project would result in a similar less-than-significant impact.

Impact 4.7.3-2 (1999 EIR): Lane closures and detours necessitated by construction of the project could temporarily increase vehicular emissions. This impact would be less than significant.

Similar to the project addressed in the 1999 EIR, operation of the pipeline would require periodic maintenance and inspection by PV Water employees. Emissions generated by employee vehicle trips would be negligible and would not exceed MBARD significance thresholds. Pumps would be powered by electricity, rather than diesel, and would not generate added criteria air pollutants. Based on the above information, this component would not result in operational emissions that would exceed thresholds set by the Monterey Bay Unified Air Pollution Control District. This would be a less-than-significant impact.

Impact 4.7.3-3 (1999 EIR): Vehicle trips resulting from operation and maintenance of the various components of the project would generate emissions of criteria air pollutants. This impact would be less than significant.

c) Would the Project expose sensitive receptors to substantial pollutant concentrations? ***Less-than-Significant Impact.***

Sensitive receptors in the Project area include three residences along San Andreas Road and an unnamed farm road off San Andreas Road. These residences are located adjacent to existing agricultural fields and proximate to large agricultural processing facilities. These residences are considered sensitive receptors; however, they are currently subjected to dust, odors, and other conditions present within agriculturally dominant areas. There are no schools or parks located within 0.25 mile of the Project area. Sunset Beach is located approximately 0.28 mile west of the Project area. The 2014 EIR addressed sensitive receptors in the Project area and concluded that various components of the would result in limited exposure to criteria air pollutants for sensitive receptors during the construction phase. Operation of the Project would not produce emissions and emissions produced during periodic maintenance and inspection would be negligible. Therefore, this impact would be less than significant.

d) Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? ***No Impact.***

The 2014 EIR addressed odor emissions from the College Lake with Pipeline to CDS component and concluded that operation would produce no odors. Likewise, operation of the proposed Project would not produce any odors. Therefore, no impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to air quality than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.4 BIOLOGICAL RESOURCES

Section 8.4 of the 1999 EIR and Section 3.4 of the 2014 EIR analyzed potential impacts biological resources associated with the CDS. A Project-specific Biological Resources Survey Report (BRSR)[7] was prepared; the results of the survey are incorporated by reference into the subsections below, and the report is included in Appendix A, Biological Resource Survey Report, of this Addendum. Surveys were conducted within a defined biological study area (BSA), which includes the Project site and an adjacent 250-foot buffer (refer to Appendix A, Figure 3). Similar to the projects assessed in the 1999 EIR and 2014 EIR, the proposed Project would be constructed within agricultural roads and agricultural fields.

3.4.1 Environmental Setting

No U.S. Fish and Wildlife Service-designated critical habitat is located within the BSA. No special-status plants or wildlife species were observed during field surveys. Based on the results of the literature review and field survey, the BSA and Project area contain marginal habitat for nesting migratory birds covered under the Migratory Bird Treaty Act as well as some potential breeding habitat and marginal upland dispersal habitat for California red-legged frog (*Rana draytonii*), a federally threatened and California Fish and Wildlife Department (CDFW) species of special concern (SSC). The Project area is generally not expected to support special-status species.

3.4.2 Impacts and Mitigation

a) *Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?* ***Less-than-Significant with Mitigation Incorporated.***

Based on the BRSR, five special-status wildlife species (Pallid bat [*Antrozous pallidus*], Townsend's big-eared bat [*Corynorhinus townsendii*], California red-legged frog [*Rana draytonii*], Santa Cruz long-toed salamander [*Ambystoma macrodactylum croceum*], and white-tailed kite [*Elanus leucurus*]) and three special status plant species (Bristly sedge [*Carex comosa*; California Native Plant Society (CNPS) 2B.1], Deceiving sedge [*Carex salinformis*; CNPS 1B.2], and Pacific Grove clover [*Trifolium polyodont*; state rare, CNPS 1B.1]) were determined to have a low potential to occur in the BSA.

Wildlife Species. The Townsend's big-eared bat and pallid bat are CDFW SSC. The California red-legged frog is federally threatened and CDFW SSC. The Santa Cruz long-toed salamander is both federally and state endangered and CDFW fully protected. White-tailed kite is CDFW fully protected.

The Coastal and Valley Freshwater Marsh may provide marginal breeding habitat for California red-legged frog and Santa Cruz long-toed salamander; however, the habitat is considered marginal due to the presence of predators (i.e., bullfrogs) and the disturbed, fragmented landscape surrounding the marsh. While the majority of the BSA is subject to routine disturbance and low-quality habitat for California red-legged frogs, roadside drainage ditches and adjacent agricultural lands may provide migration corridors for frogs traveling to/from breeding sites.

Buildings and large trees observed throughout the BSA may provide suitable habitat for individuals or small groups of maternity roosting pallid bats and Townsend's big-eared bats. Adjacent agricultural fields

[7] SWCA Environmental Consultants (SWCA). 2019. *Biological Resources Survey Report for the Pajaro Valley Water Management Agency Coastal Distribution System Pipeline Expansion Project, Santa Cruz County, California*. August 2019.

may provide foraging opportunities for both species. However, there are no known roosting occurrences of bats within the BSA. Potential nesting habitat for white-tailed kites exists in well-established trees and man-made structures, and adequate foraging habitat may exist across agricultural fields and around the Coastal and Valley Freshwater Marsh. However, there are no known nesting occurrences of white-tailed kites within the BSA.

Plant Species. Three special-status plants were determined to have potential to occur within the BSA: bristly sedge, deceiving sedge, and Pacific Grove clover; each of these species are associated with freshwater marsh and wetlands areas. None of the three plant species have been recorded within 5 miles of the BSA, and the surrounding area is heavily disturbed. Therefore, the Project would not impact special status plants. The coastal and valley freshwater marsh observed in the BSA at Water Feature 8 (refer to Appendix A, Figure 3) may provide suitable habitat for these species; however, Water Feature 8 is outside the construction area of the proposed Project. The June 2019 survey was conducted within the appropriate bloom period for each of these species, and no individuals were observed within the BSA. Since the likelihood of these species being present is low, and impacts relate to construction runoff and sedimentation would be reduced by the Project's SWPPP, impacts related to special-status plant species would be less than significant.

The 1999 EIR identified significant impacts to a number of wetland species, including loss of wetland habitat. Impacts to special status-species related to the Project are significantly less extensive. Mitigation Measure 8.4.3-1b has been deleted because it is addressed in Mitigation Measure HYD-1 (New) in Section 3.10, Hydrology and Water Quality, which required construction stormwater quality best management practices to be employed. Mitigation Measure 8.4.3-2c, which addressed seven special status species and more extensive wetlands impacts, has been replaced with Mitigation Measure BIO-2 (New), based on the location of the Project, habitat conditions, and current requirements for the protection of special-status species. Mitigation Measures 4.4.3-2d, 7.4.3-2c, and 8.4.3-2e are not included based on the location of the Project and current requirements for the protection of special-status species. Mitigation Measure BIO-3 (New) is introduced to prevent impacts to pallid bat and Townsend's big-eared bat. Mitigation Measure BIO-1 (New) is identified to further protect special status species by providing worker training prior to construction.

Impact 8.4.3-2 (1999 EIR): Construction of facilities in and near wetlands could result in temporary loss of ~~up to 1.4 acres~~ small areas of habitat for California red-legged frog and Santa Cruz long-toed salamander in the vicinity of wetlands and drainage ditches in the Project area ~~special status species~~. In addition, construction activities could disturb roosting bats. Impacts could occur due to increased sedimentation in drainage ditches, ~~streams, dewatering of pools,~~ temporary habitat loss through vegetation removal, ~~destruction of nests and burrows~~ and construction disturbance. Significant. With mitigation identified in this EIR the impact would be reduced to less than significant levels.

~~Mitigation Measure 4.4.3-2b (1999 EIR): Survey, Consultation and Protection Measures for California red-legged frog. Since potential habitat for the California red-legged frog is present at Corralitos and Salsipuedes creeks, informal consultation with the USFWS was initiated and a site assessment was carried out as part of the field surveys in 1999. Since red-legged frogs are presumed present, reasonable and prudent protection measures outlined in the Programmatic Biological Opinion (FWS 1999) (required by Endangered Species Act) will be carried out for this project.~~

~~Mitigation Measure 7.4.3-2c (1999 EIR): Survey, Consultation and Protection Measures for Special Status Wildlife Species. Since the Central Coast steelhead and tidewater goby are known to be present and potential habitat for the California red-legged frog was found as part of the site assessment, reasonable and prudent measures for protection of the California red-legged frog contained in the Biologic Programmatic Opinion for this species shall be implemented if the U.S. Army Corps of~~

~~*Engineers finds that impact to this species is likely. If impacts to the Central Coast steelhead or tidewater goby may occur as part of this project, a formal consultation and Biological Opinion must be prepared for FWS under the Endangered Species Act.*~~

~~*Mitigation Measure 8.4.3-1b (1999 EIR): Implement Standard Protective Measures to Maintain Water Quality and Control Erosion and Sedimentation. Standard measures to maintain water quality and to control erosion and sedimentation are recommended as in Mitigation Measure 4.4.3-1b. This includes trenching across wetlands during low flow periods, excluding water from construction by diversions as feasible, use of sediment curtains, placing spoil sites outside waterways, preparing and implementing a spill prevention plan, storing equipment and materials outside the wetlands, and revegetating impacted wetland vegetation according to a detailed revegetation plan approved by the Corps and/or CDFG.*~~

~~*Mitigation Measure 8.4.3-2c (1999 EIR): Survey, Consultation and Protection Measures for special status wildlife species. As part of the habitat assessment, potential habitat for the California red-legged frog was found to be present at Watsonville Slough. Potential habitat may also be present for Santa Cruz long-toed salamander. Central Coast steelhead, and tidewater goby are present at the Pajaro River, and potential habitat for California red-legged frog was identified here as well. As a result, PVWMA will initiate formal consultation with USFWS and CDFWG if these areas will be impacted.*~~

~~*Protective measures shall be carried out as in Mitigation Measure 4.4.3-2b and 7.4.3-2c, including all reasonable and prudent measures outlined in the Programmatic Biological Opinion for the California red-legged frog (FWS, 1999).*~~

Mitigation Measure BIO -1 (New): Pre-Construction Worker Environmental Awareness Training. Prior to any Project construction activities, environmental awareness training will be conducted for on-site construction personnel. The training will explain measures to prevent impacts on nesting birds and special-status species with potential to occur in the Project area. The training will also include a description of these special-status species and their habitat needs, and an explanation of the status of these species and their protection under the Federal Endangered Species Act, California Endangered Species Act, Migratory Bird Treaty Act, and other statutes. A brochure will be provided with color photos of sensitive species as well as a discussion of Project measures.

Mitigation Measure BIO-2 (New): Pre-construction Santa Cruz Long-Toed Salamander Survey. A preconstruction survey for Santa Cruz long-toed salamander shall be conducted within the construction zone immediately prior to ground disturbance. If no individuals are detected during this survey, then construction-related activities may proceed. If Santa Cruz long-toed salamanders are found within the work area, construction activities will be halted and will not resume until the individuals have moved off the construction site on their own volition.

Mitigation Measure BIO-3 (New): Pre-construction California Red-legged Frog Survey. A preconstruction survey for California red-legged frog shall be conducted within the construction zone immediately prior to ground disturbance. If no individuals of these species are detected during these surveys, then construction-related activities may proceed. If CRLF are found, construction will halt, USFWS and CDFW will be notified and the relocation of the individual will be completed with prior approval by USFWS and CDFW.

Mitigation Measure BIO-4 (New): Preconstruction Maternity Roost Bat Surveys. During the breeding season of native bat species in California (April 1 through August 31), a qualified biologist will conduct a focused survey to determine if active maternity roosts of special-status bats are present within 250 feet of the Project area. Should an active maternity roost of a special-status bat species be identified, the roost shall not be disturbed until the roost is vacated, as determined by the biologist.

Implementation of Mitigation Measures BIO-1 (New), BIO-2 (New), BIO-3 (New), BIO-4 (New), and HYD-1 (New) would ensure impacts to special-status species are minimized, and the impact would be reduced to less than significant.

b) Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? ***Less-than-Significant Impact.***

Potentially jurisdictional wetlands and other waters identified in impact I below are considered Environmentally Sensitive Habitat Areas per the Santa Cruz County LCP definition. The Santa Cruz County LCP does not define wetlands, and thus defers to the same single-parameter definition of wetlands as defined by the California Coastal Commission (CCC). Activities in these areas are regulated by the County under the CCC-certified LCP.

Plant communities observed within the BSA included agricultural, ruderal and developed, coastal and valley freshwater marsh, and open water. The sensitive natural community Coastal and Valley Freshwater Marsh was observed within the Project area.

The BSA is primarily dominated by disturbed land uses including agricultural and ruderal/developed lands. Agricultural land makes up the majority of the BSA. At the time of the surveys these areas were in active cultivation of strawberries, brussel sprouts, and some areas were tilled or fallow. Ruderal vegetation was observed growing along the perimeters of agricultural fields.

Coastal and valley freshwater marsh habitat observed within the BSA is limited to the southern portion of the alignment, approximately 80 feet west of the F line (see Appendix A, Figure 3). This feature is fed by irrigation runoff from adjacent agricultural fields and a roadside drainage ditch. The feature was ponded at the time of the survey and included bulrush, cattail, dotted smartweed, arroyo willow, and duckweed. Impacts to this habitat could occur from construction-related erosion and sedimentation. Standard measures to maintain water quality and to control erosion and sedimentation, addressed in the Project's SWPPP shall be implemented. These measures include implementing stormwater best management practices, storing equipment and materials outside water features, and maintaining vehicles and equipment to avoid spills. The Project's SWPPP is described under Section 3.10, Hydrology and Water Quality, Mitigation Measure HYD-1 (New). Implementation of the SWPPP would further reduce this less-than-significant impact.

c) Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? ***Less-than-Significant Impact with Mitigation Incorporated.***

SWCA biologists conducted visual investigations of the Project area for the presence/absence of jurisdictional wetlands and waters of the U.S., waters of the State, and coastal wetlands. Eight potentially jurisdictional drainage features were mapped within the BSA and are shown in Appendix A, Figure 3.

- One ephemeral drainage feature, Water Feature 1 (refer to Appendix A, Figure 3), was observed. This feature contained bed, banks, and marginally defined ordinary high water marks. It bisects the northern portion of the F line (approximately 0.27 mile south of McQuaide Drive). This feature is fed by irrigation runoff from adjacent agricultural fields and drains generally west into the Pacific Ocean. This feature may be considered jurisdictional by the U.S. Army Corps of Engineers (USACE), CDFW, Regional Water Quality Control Board (RWQCB) and CCC. The F line of the F Line Project would cross this water feature by open trenching. The open trench

dimensions would be up to 6.5 feet in width and up to 13 feet deep. The drainage is less than 2 feet wide at this point. The trench would disturb a total of approximately 0.0003 acres, or approximately 13 square feet of this drainage feature.

- Five isolated wetland features and ponded areas, Water Features 2 through 6 (refer to Appendix A, Figure 3), were also observed throughout the BSA. These features lacked defined bed and banks and lacked connectivity to traditionally navigable waters or relatively permanent waters; therefore, they likely would not be considered jurisdictional by USACE or CDFW. However, based on the presence of hydrophytic vegetation and/or wetland hydrology, these features may be considered jurisdictional under the RWQCB and/or CCC. They include the following water features:

    2. A culvert inlet on the east side of San Andreas Road, approximately 90 feet east of the F line and approximately 600 feet north of the junction with the F6 line,

    3. A culvert outlet on the west side of San Andreas Road, approximately 36 feet east of the F line and approximately 600 feet north of the junction with the F6 line,

    4. A culvert inlet adjacent to the F6 line and approximately 100 feet east of the junction with the F line,

    5. A culvert outlet southwest of the junction of the F and F6 lines approximately 130 feet east of the F line and approximately 50 feet south of the F6 line, and

    6. A culvert outlet on the north side of the farm road and approximately 25 feet north of the F6 line.

- Two isolated drainage features, Water Features 7 and 8, were observed in the BSA. These include the linear drainage ditch near the eastern-most proposed staging area and the coastal and valley freshwater marsh. These features contained defined bed and banks and evidence of hydrophytic vegetation and/or wetland hydrology (Attachment A, Figure 3,). Therefore, these two features may be considered jurisdictional under the RWQCB, CDFW, and CCC. These include:

    7. A linear drainage ditch on the east side of the proposed northern staging area. Staging area activities would avoid this drainage, and

    8. Coastal and valley freshwater marsh approximately 80 feet west and approximately 0.43 mile north of the southern end of the F line. This feature is fed by irrigation runoff from adjacent agricultural fields and a roadside drainage ditch. The feature was ponded at the time of the survey and included bulrush, cattail, dotted smartweed, arroyo willow, and duckweed. These perennial plants have been well established and create habitat for various avian and amphibian species, including suitable breeding habitat for California red-legged frog. The marsh is approximately 815 feet west of San Andreas Road and adjacent to and south of a farm access road.

The Project would cross one ephemeral drainage, intersecting less than 0.001 acres, as described above. Impacts to waters would be related to open-trench construction across one ephemeral drainage and potential sedimentation and water quality impacts to all eight water features from trenching activities and construction runoff.

The 1999 EIR identified significant impacts to wetlands and waters of the State. Impacts to waters related to the Project would affect ephemeral water features and culverts, and are significantly less extensive than

those in the 1999 EIR. Mitigation Measure 8.4.3-1b has been deleted because it is addressed in Mitigation Measure HYD-1 (New) in Section 3.10, Hydrology and Water Quality, which required construction stormwater quality best management practices to be employed. Mitigation Measure 8.4.3-1c has been deleted because it addressed restoration requirements for impacts to Pajaro River, McClusky Slough, and Watsonville Slough. None of these water features would be impacted by the proposed Project. Mitigation Measures 8.4.3-1a and 4.4.3-1b, which addressed more extensive wetlands impacts, have been revised, based on the location of the Project and wetland conditions. Mitigation Measure 8.4.3-c is not included based on the location of the Project.

Impact 8.4.3-1 (1999 EIR): Construction of the proposed project could result in temporary impacts of up to 0.003 ~~1.4~~ acres of potential jurisdictional ~~wetlands/~~waters of the U.S. ~~and streambeds and banks~~. Potential impacts could occur due to sedimentation of the channels outside of the construction area during trenching activities, loss of riparian vegetation ~~and stream function as wildlife and fishery habitat~~, and loss of special status natural communities. Significant. With mitigation identified in this EIR the impact would be reduced to less than significant levels.

Mitigation Measure 8.4.3-1a (1999 EIR): Avoidance of Wetlands. The crossings of jurisdictional areas ~~at the Pajaro Rover, McClusky Slough, and Watsonville Slough~~ shall be avoided to the extent feasible by project construction, maintaining all facilities outside the jurisdictional area defined by riparian or emergent vegetation. ~~Bore and jack, tunneling and directional drill methods shall be used to install the pipeline under creek channels and culverts.~~ Trenching shall be limited to existing filled or developed areas, to the extent possible. ~~This measure would also avoid impacts to special status species potentially occurring in the waterways (see Impact 8.4.3-2). If complete avoidance is infeasible, implement Measure 8.4.3-1b.~~

~~*Mitigation Measure 8.4.3-1b (1999 EIR): Implement Standard Protective Measures to Maintain Water Quality and Control Erosion and Sedimentation. Standard measures to maintain water quality and to control erosion and sedimentation are recommended as in Mitigation Measure 4.4.3-1b. This includes trenching across wetlands during low flow periods, excluding water from construction by diversions as feasible, use of sediment curtains, placing spoils outside waterways, preparing and implementing a spill prevention plan, storing equipment and materials outside the wetlands, and revegetating impacted wetland vegetation according to a detailed revegetation plan approved by the Corps and/or CDFG.*~~

Mitigation Measure 4.4.3-1b (1999 EIR): Implement Standard Protective Measures to Maintain Water Quality and Control Erosion and Sedimentation. Standard measures to maintain water quality and to control erosion and sedimentation are recommended:

- *Restrict trenching across all waterways to low-flow periods.*
- ~~*Exclude water from around the section of trench that is within the actively flowing channels. This will further reduce the potential for sediment or other pollutants to enter the waterways and impact downstream resources. The diversion will consist of water pillows, rock, sandbags, or other structural methods deemed most effective by the project Engineer.*~~
- ~~*Place sediment curtains downstream of the construction zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone.*~~
- *Locate spoil sites so they do not drain directly into waterways. If a spoil site drains into a channel, catch basins will be constructed to intercept sediment before it reached the channels. Spoil sites will be graded to reduce the potential for erosion.*

- *Prepare and implement a spill prevention plan for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching ~~creek~~ drainage channels.*

- *Store equipment and materials away from waterways, outside existing levees or at least 50 feet from waterways, but within the pipeline right-of-way. No equipment or materials shall be deposited within 100 feet of wetlands.*

- *Provide proper and timely maintenance for vehicles and equipment used during construction to reduce the potential for mechanical breakdowns leading to a spill of materials into or around drainages ~~creeks~~. Maintenance and fueling will be conducted in an area that meets the criteria set forth in the spill prevention plan (i.e. away from the drainages ~~creek~~).*

~~*Mitigation Measure 8.4.3-1c (1999 EIR): Restore Pajaro River riparian forest, McClusky Slough wetlands, and Watsonville Slough wetlands. The revegetation plan for the project shall include restoration of riparian forest and wetlands that may have been impacted by construction (i.e. jack and bore staging). Revegetation shall include installation of trees and shrubs in a ratio 3:1 to replace lost vegetation, specifications for after-installation care, weed control, and monitoring for a three year period following installation. Wetland restoration shall include salvage of sod and soil, maintenance during construction, reinstallation following the completion of construction, weed control, and monitoring, performance criteria and replacement measures as needed. Revegetation materials shall consist of locally obtained, locally indigenous species.*~~

Implementation of Mitigation Measures 8.4.3-1a, 4.4.3-1b, and HYD-1 (New) would ensure impacts to state or federally protected waters are minimized, and the impact would be reduced to less than significant.

d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Project would construct an underground pipeline through mostly agricultural fields. There are no identified wildlife corridors or wildlife nursery sites in the Project area.

White-tailed kite is a state fully protected species. Potential nesting habitat for white-tailed kites exists in well-established trees and man-made structures and adequate foraging habitat across agricultural fields and around the Coastal and Valley Freshwater Marsh. However, there are no known nesting occurrences of white-tailed kites within the BSA.

During the June 2019 field survey, a variety of avian species and activity was observed. While no active nests were observed, a variety of nesting substrate, including trees, shrubs, and coastal and valley freshwater marsh was observed throughout the BSA. While ongoing agricultural operations and adjacent roadways may discourage avian nesting due to routine disturbance, there remains a potential for avian species to nest and forage within the BSA.

The potential for disruption of nesting birds, including white-tailed kite, was addressed in both the 1999 EIR and the 2014 EIR. Impact BIO-2 from the 2014 EIR addressed several impacts that were combined under the pre-2018 CEQA checklist. This impact and Mitigation Measures BIO-2a and BIO-2i have been revised to target the proposed Project environment and impacts to nesting birds and reflect current requirements. Mitigation Measures BIO-2, BIO-2b through BIO-h, and BIO-2j have not been included as they do not pertain to nesting birds, wildlife movement corridors, or native wildlife nursery sites.

Impact BIO-2 (2014 EIR): Construction and operation of the CDS F Line Project ~~BMP Update components~~ could result in a substantial adverse effect on nesting birds in the project area~~, either directly or through habitat modifications on; or substantially reduce the number or restrict the range of any wildlife species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service~~. Impacts could occur due to ~~increased sedimentation in streams, dewatering of pools, reducing the wetted extent (including exposing CRF egg masses to desiccation or predation), habitat loss through vegetation removal,~~ destruction or removal of nests ~~and burrows, and other~~ construction disturbance. This represents a potentially significant impact; however, the impact would be reduced to a less-than-significant level with incorporation of the following mitigation measure~~s~~.

Mitigation Measure BIO-2a (2014 EIR): During project activities, all trash ~~that may attract predators~~ will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.

~~*Mitigation Measure BIO-2b (2014 EIR): All refueling, maintenance, and staging of equipment and vehicles will occur at least 65 feet from any riparian habitat or water body. The Agency will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the Agency will ensure that the contractor has prepared a plan to allow a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.*~~

~~*Mitigation Measure BIO-2c (2014 EIR): The spread or introduction of invasive exotic plant species will be avoided to the extent practicable. When practicable, invasive exotic plants in the project areas will be removed.*~~

~~*Mitigation Measure BIO-2d (2014 EIR): Prior to any on-site work in areas where special-status species may occur, a qualified biologist will conduct a tailgate training session in which all construction personnel will receive training regarding measures (below) that are to be implemented to avoid environmental impacts. This training will include a presentation of the potential for sensitive species to occur at the site and measures to protect habitat including aquatic habitat and avoid impacts to the species. All personnel working on the site will receive this training, and will sign a sign-in sheet showing they received the training.*~~

~~*Mitigation Measure BIO-2e (2014 EIR): Prior to the commencement of work, the limits of the work area (including haul routes, access ramps, storage areas and material stockpiles) will be clearly marked with orange construction fencing to prevent workers from impacting habitat outside the work area. No work will occur outside the designated marked work areas.*~~

~~*Mitigation Measure BIO-2f (2014 EIR): Each morning before work begins on any components in or within 100 feet of a suitable habitat area (defined as: riparian habitat, USACE jurisdictional wetlands "r "other wat"rs" of the U.S., or sensitive habitats identified in subsequent USFWS Biological Opinions and CDFW 1600 Lake and Streambed Alteration Agreements), a qualified monitor will survey the work site and habitat immediately surrounding the active work site for conditions that could impact special-status species, and will remain on-site whenever work is occurring that may adversely impact special-status species and their habitats. No work will be allowed to begin each morning until the monitor has inspected the work site.*~~

~~*Mitigation Measure BIO-2g (2014 EIR): A USFWS-approved biologist or biological monitor will permanently remove from within the project area(s), any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes to the extent practicable.*~~

~~*Mitigation Measure BIO-2h (2014 EIR): Upon locating individuals of special-status species that are dead or injured as a direct result of activities conducted by the City, initial notification will be made to the USFWS's Division of Law Enforcement at (916) 978-4861 (Sacramento) within three working days of its finding. The USFWS Field Office within whose area of responsibility the specimen is recovered will also be notified. Written notification will be made within five calendar days and include the date, time, and location of the carcass, a photograph, cause of death, if known, and any other pertinent information.*~~

Mitigation Measure BIO-2i (2014 EIR): Nesting Bird Surveys. Prior to any project construction activities, the project proponent will take the following steps to avoid direct losses of nests, eggs, and nestlings and indirect impacts to avian breeding success:

- *If construction activities occur only during the non-breeding season, between August 31 and February 1, no surveys will be required.*

- *During the breeding bird season (February 1 through August 31), a qualified biologist will survey construction areas and the surrounding 500-foot buffer ~~in the vicinity of the project site~~ for nesting raptors and 250-foot buffer for all other avian species ~~passerine birds~~ not more than 14 days prior to any ground-disturbing activity or vegetation removal. Surveys will include all potential habitats within 500 feet (for raptors) of activities and all onsite vegetation including bare ground within 250 feet of activities (for all other avian species).*

- ~~*If results are positive for nesting birds,*~~ *If active nests are observed (containing eggs or chicks), avoidance procedures will be adopted by an avian biologist~~, if necessary,~~ on a case-by-case basis. These may include implementation of buffer areas (minimum 50-foot buffer for passerines and 250-foot minimum buffer for raptors) or seasonal avoidance.*

~~*Mitigation Measure BIO-2j (CRT) (2014 EIR): The following measures for avoidance and minimization of adverse impacts to California Red-Legged Frog (Rana draytonii) (CRF) during construction of the BMP projects are those typically employed for construction activities that may result in shortterm impacts to individuals and their habitat. The focus of these measures is on scheduling activities at certain times of year, keeping the disturbance footprint to a minimum, and monitoring. Consultation with the USFWS will be conducted and a Biological Opinion developed for each BMP Update component that requires a USACE Section 404 Wetland Permit. Ongoing and future CRF studies in the project area may result in site-specific conditions that would be integrated into the future project-level BMP component designs, permitting and operations.*~~

Implementation of Mitigation Measures BIO-2a, BIO-2i would ensure impacts to the movement of native resident or migratory wildlife species are minimized, and the impact would be reduced to less than significant.

e) *Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?* ***No Impact.***

The Project is located in an agricultural area and will be constructed primarily on roads, farm roads, and agricultural land. No trees and little native vegetation will be removed as part of the Project. Santa Cruz County has a significant tree protection ordinance[8], but as the Project will not trim, damage, or remove any trees, it will not apply.

[8] Santa Cruz County. 1983. *Santa Cruz County Municipal Code, Chapter 16.34. Significant Trees Protection.* Available Online at: https://www.codepublishing.com/CA/SantaCruzCounty/html/SantaCruzCounty16/SantaCruzCounty1634.html#16.34. Accessed August 21, 2019.

f) *Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?* ***No Impact.***

There are no Habitat Conservation Plans or Natural Community Conservation Plans in the Project Area. No impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to biological resources than previously disclosed in the 1999 EIR and 2014 EIR.

3.5 CULTURAL RESOURCES

Section 8.5 of the 1999 EIR and Section 3.5 of the 2014 EIR analyzed potential impacts to cultural resources associated with the CDS. A Project-specific Cultural Resources Survey Report (CRSR)[9] (SWCA 2019) was prepared; the results of the survey are incorporated by reference into the section below, and the report is included in Appendix B of this Addendum. Surveys were conducted within a defined survey area, which includes the Project site and an adjacent 100-foot buffer (refer to Appendix B, CRSR Figure 2). Because of the sensitivity of cultural resources, specific details regarding the location and nature of identified cultural resources are kept confidential at PV Water. Similar to the projects assessed in the 1999 EIR and 2014 EIR, the proposed Project would be constructed within agricultural roads and agricultural fields.

3.5.1 Environmental Setting

The ethnographically documented aboriginal inhabitants of the Project area were part of the Ohlone, or Costanoan, language group, which extended from the San Francisco Bay area south to the southern Monterey Bay and lower Salinas River areas. Colonization by the Spanish in what was then known as Alta California occurred in the late 1700s. Soon after the first of these expeditions, Missions San Carlos de Borromeo (1770), Santa Clara (1777), and Santa Cruz (1791) were founded. The mission closest to the Project area, Santa Cruz, was founded in 1791.

3.5.2 Impacts and Mitigation

The records search was conducted by staff at the NWIC on June 10, 2019, and revealed that no previously recorded cultural resources are within or adjacent to the Project area. SWCA conducted an intensive pedestrian survey of the Project area on July 2 and 3, 2019. No cultural resources were identified as a result of the field survey. The Native American Heritage Commission (NAHC) Sacred Land File search response stated the results were "positive," but provided no further information regarding the nature or reasoning. Follow-up letters and phone outreach to identified tribal representatives did not result in any responses, and no further information was garnered from the effort.

While it is clear from prior studies the general Project vicinity is sensitive for the presence of known and undocumented prehistoric archaeological resources, the lack of identified resources in the Project area as a result of this and prior studies indicates diminished sensitivity for encountering obscured and/or buried resources during Project implementation. The majority (90%) of the Project area was previously subject to cultural resources study, including pedestrian survey, with parallel findings.

[9] SWCA. 2019. *Cultural Resources Survey Report for the Pajaro Valley Water Management Agency Coastal Distribution System Pipeline Expansion Project, Santa Cruz County, California*. August 2019.

a) *Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?* ***No Impact.***

A historical resource is a resource listed in, or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (Section 21084.1), a resource included in a local register of historical resources (California Code of Regulations [CCR] Section 15064.5(a)(2)), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (CCR Section 15064.5(a)(3)).

Public Resources Code (PRC) Section 5024.1 requires an evaluation of historical resources to determine their eligibility for listing on the CRHR. The purpose of the CRHR is to maintain listings of the state's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP) and are enumerated below.

According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

A. is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

B. is associated with the lives of persons important in our past;

C. embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or

D. has yielded, or may be likely to yield, information important in prehistory or history.

No historic resources have been identified on the Project site; therefore, no impact would occur.

b) *Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?* ***Less than Significant with Mitigation Incorporated.***

While it is clear from prior studies the general Project vicinity is sensitive for the presence of known and undocumented prehistoric archaeological resources, the lack of identified resources in the Project area as a result of this and prior studies indicate diminished sensitivity for encountering obscured and/or buried resources during Project implementation. As there are no identified archeological resources in the Project area, no impact would occur.

Although unlikely, buried or obscured archaeological resources may be encountered during construction. In the event that archaeological resources are inadvertently discovered during construction, work in the immediate vicinity of the find (within 25 feet [7.6 meters]) must stop until a qualified archaeologist can evaluate the significance of the find. Construction activities may continue in other areas beyond the 25-foot stop work area. A qualified archaeologist is defined as someone who meets the Secretary of the Interior's Professional Qualifications Standards in archaeology. If the discovery proves significant under the CEQA, additional mitigation may be warranted.

The 1999 EIR and 2014 EIR both evaluated impacts to cultural resource in the Project area. Impact CR-1 and Mitigation CR-1c have been revised to target the proposed Project environment and impacts to related to previously undiscovered resources, and reflect current requirements. Mitigation Measures

CR-1a and CR-1b are not pertinent to the Project since no known archaeological resources occur in the Project vicinity.

Impact CR-1 (2014 EIR): Construction activities associated with proposed CDS F Line Project ~~implementation of BMP Update components~~ may ~~result in the alteration or destruction of recorded archaeological sites or~~ encounter unknown, buried resources during ground disturbing activities, which is a potentially significant impact. With mitigation identified in this EIR, the impacts would be reduced to less-than-significant levels.

~~Mitigation Measure CR-1a (2014 EIR): Final pipeline and facility plans shall locate facilities and pipeline alignments away from identified and recorded archaeological sites in each component area based on a site reconnaissance and archaeological investigation conducted by a qualified archaeologist at the time site-specific construction plans are developed. The archaeologist shall identify the areal extent of potential recorded sites, assess potential significance to identified resources, recommend adjustment to siting of improvements, facilities and/or pipeline alignments, if necessary, and provide other recommendations to avoid impacts to identified significant resources. If a significant or potentially significant archaeological or historic resource is identified pursuant to the definitions in the State CEQA Guidelines as identified above, the consulting archaeologist shall develop an appropriate mitigation plan for the cultural resource. Possible mitigation measures for important cultural resources may include monitoring by a qualified archaeologist during construction at identified sensitive sites, documentation and recordation of the resource, recovery and relocation, or stabilization of the resource.~~

~~Mitigation Measure CR-1b (2014 EIR): The cultural resource boundaries of potentially significant sites shall be marked as exclusion zones both on ground and on construction maps prior to the commencement of construction activities on component sites. Construction supervisory personnel shall be notified of the existence of cultural resources in each component area and will be required to keep personnel and equipment away from these cultural resources sites. During construction and operational phases, personnel and equipment will be restricted to each surveyed corridor for each component.~~

Mitigation Measure CR-1c (2014 EIR): Should any as yet undiscovered cultural resources be uncovered at any component site, such as structural features, or unusual amounts of bone or shell, artifacts, ~~human remains,~~ or architectural remains be encountered during any development activities, work ~~will be suspended~~ in the immediate vicinity of the find (within 25 feet [7.6 meters]) must stop until a qualified archaeologist can evaluate the significance of the find. Construction activities may continue in other areas beyond the 25-foot stop work area. ~~and PVWMA staff will be contacted.~~ A qualified professional archaeologist is defined as someone who meets the Secretary of the Interior's Professional Qualifications Standards in archaeology. If the discovery proves significant under the CEQA, additional mitigation may be warranted. ~~shall be retained and will perform any necessary investigations to determine the significance of the find. PVWMA will then implement any mitigation deemed necessary for the recordation and/or protection of the cultural resources. In addition, pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work must be halted and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.~~

Implementation of Mitigation Measure CR-1c would ensure impacts to archaeological resources are minimized, and the impact would be reduced to less than significant.

c) *Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?* ***Less than Significant with Mitigation Incorporated.***

There are no known cemeteries or burial grounds in the Project area; therefore, the Project would not impact any known human remains. The discovery of human remains is always a possibility during ground disturbances. Disturbance of previously undiscovered human remains would be a potentially significant impact.

The 1999 EIR and 2014 EIR both evaluated impacts to buried cultural resource in the Project area. Impact CR-1 has been revised to target the proposed Project environment and impacts to related to previously undiscovered human remains. Mitigation Measures CUL-1 has been added to reflect current requirements.

Impact CR-1 (2014 EIR): Construction activities associated with proposed CDS F Line Project ~~implementation of BMP Update components~~ may ~~result in the alteration or destruction of recorded archaeological sites or~~ encounter unknown, buried human remains ~~resources~~ during ground disturbing activities, which is a potentially significant impact. With mitigation identified in this EIR, the impacts would be reduced to less-than-significant levels.

Mitigation Measure CUL-1 (New): The discovery of human remains is always a possibility during ground disturbances. State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to California PRC Section 5097.98. The County Coroner must be notified of the find immediately, and all work shall cease in the immediate vicinity of the find. If the human remains are determined to be ancient or likely Native American, the coroner will notify the NAHC, which will designate and notify a Native American Most Likely Descendent (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burials.

Implementation of Mitigation Measure CR-1c would ensure impacts to human remains are minimized, and the impact would be reduced to less than significant.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to cultural than previously disclosed in the 1999 EIR and 2014 EIR.

3.6 ENERGY

Energy resources were discussed in Section 3.6, Energy, Utilities and Service, of the 2014 EIR, which analyzed potential energy impacts associated with the College Lake with Pipeline to CDS. It noted the estimated operational power demand for the College Lake with Inland Pipeline to CDS component is approximately 800,000 kWh per year, which represented a less-than-significant increase in energy consumption. Energy resources were not discussed in the 1999 EIR.

3.6.1 Environmental Setting

Electricity and natural gas are provided to Santa Cruz County by the Pacific Gas and Electric Company (PG&E); electricity is also provided by Monterey Bay Community Power. A consortium of local governments in Santa Cruz, Monterey, and San Benito Counties has established a Community Choice Aggregation (CCA) Joint Powers Agency (Monterey Bay Community Power), which is providing carbon-

free, locally controlled energy to customers. Commercial and agricultural customers have been enrolled in the new program since March 2018.[10]

Diesel fuel for construction vehicles and equipment is available at SC Fuels (103 Lee Road, 1.87 miles) and CFN Fuel (1164 West Beach Street, 2.2 miles).

Natural gas is measured in British thermal units (Btu), and electricity is measured in kilowatt hours (kWh). In 2018, total natural gas consumption was 51.87 million Btu, which was down from the 2011 consumption of 58.49 million Btu referenced in the 2014 EIR.[11] In 2018, total energy electricity consumption in Santa Cruz County was 1,2017,15 million kWh, which was down from the 2011 consumption of 1,253.02 million kWh referenced in the 2014 EIR.[12]

3.6.2 Regulatory Setting

3.6.2.1 State

Global Warming Solutions Act of 2006, Assembly Bill (AB) 32: The Global Warming Solutions Act of 2006 provides a statewide directive to achieve 1990 GHG emissions levels by 2020, equivalent to a 15% reduction below baseline 2005–2008 emissions levels.

Global Warming Solutions Act of 2006: emissions limit, Senate Bill (SB) 32: This bill expands on AB 32 to require that there be a reduction in GHG emissions to 40% below the 1990 levels by 2030.

California Clean Energy Act of 2017, SB 100: SB 100 was passed into law in September 2018 and went into effect January 2019. The legislation establishes an overall state target of 100% clean energy for California by 2045 by directing the California Public Utilities Commission (CPUC), California Energy Commission (CEC), and California Air Resources Board (CARB) to adopt policies and requirements to achieve total reliance on renewable energy and zero carbon resources by that date. In addition, the law accelerates SB 350's 50% mandate for clean renewable energy from 2030 to 2026 and establishes a new Renewable Portfolio Standard benchmark of 60% by 2030 to ensure more clean energy in the California grid sooner.

SB 100 obliges California to meet 50% of its energy needs with clean power by 2025 and 60% by 2030 before ramping up to 100% by 2045. Legislation had previously set a goal of reaching 50% carbon-free energy by 2030. Technologies considered clean power include solar, wind, geothermal, biomass, small hydropower, and renewable gas projects, as well as wave, ocean current, and waste conversion energy projects. Nuclear power and large hydropower projects are not considered clean energy under the law.

Carbon Neutrality Executive Order, 2018: In September 2018, Governor Brown signed the Carbon Neutrality Executive Order, requiring California to achieve carbon neutrality "as soon as possible, and no later than 2045." Under the order, all policies and programs undertaken to achieve carbon neutrality shall seek to improve air quality and support the health and economic resiliency of urban and rural communities and support climate adaptation. The order recognizes that the California legislature has required the state to double the rate of energy efficiency savings in buildings, among other steps taken to reduce GHGs.

[10] *Santa Cruz Sentinel.* 2018. Santa Cruz County residents switch to locally-controlled, carbon free electricity. Available online at: https://www.santacruzsentinel.com/2018/07/02/santa-cruz-county-residents-switch-to-locally-controlled-carbon-free-electricity/. Accessed August 22, 2019.

[11] California Energy Commission (CEC). 2019. *Gas Consumption by County.* Available online at: https://ecdms.energy.ca.gov/gasbycounty.aspx. Accessed August 22, 2019.

[12] California Energy Commission (CEC). 2019. *Electricity Consumption by County.* Accessed August 22, 2019.

Renewable Energy for Agriculture: This program uses cap-and-trade dollars generated under AB 32 and SB 32 to provide grants for renewable energy projects for agriculture.

3.6.2.2 Local

Santa Cruz County Measure C – Decade of the Environment (1990)

- To provide for efficient use of renewable energy and recycled resources;
- To promote and encourage economic development strategies in Santa Cruz County which are consistent with both environmental protection and restoration, and which will help create a local economy based on the use of renewable resources; and
- To ensure that future growth and development in Santa Cruz County adheres to the natural limits and carrying capacity of the Santa Cruz County environment.

Santa Cruz County General Plan Goals and Policies

- Goal. Resource Utilization: To provide for the conservation and environmentally sound and orderly economic use of renewable and nonrenewable natural resources to provide employment and income in Santa Cruz County while minimizing impacts to adjoining land uses and the environment;
- Policy 5.17.1 – Promote Alternative Energy Sources: Promote the use of energy sources which are reviewable, and less environmentally degrading than non-renewable fossil fuels;
- Policy 15.17.4: Encourage and stimulate energy conservation and the use of renewable energy through retrofit programs for residential, agricultural, commercial, public facilities and industrial land uses

3.6.3 Impacts and Mitigation

a) Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? ***Less-than-Significant Impact.***

Construction of the Project would result in indirect energy consumption from construction traffic and the use of construction materials. The primary energy demand during construction would occur from use of gasoline- and diesel-powered mobile construction equipment and vehicles to transport workers and materials to and from the construction site. Electricity would also be used for construction lighting, field services, and electrically driven construction devices such as air compressors, pumps, and other equipment.

The Project would result in very little indirect energy consumption as a result of post-construction traffic (i.e., operational traffic). Although the Project would result in increased indirect energy consumption, the amount of transportation fuel and potential electricity use required for Project operation is not considered an inefficient or wasteful use of energy.

The Project would not increase the water supply pumped for irrigation, and it would not extend the irrigation season. The Project would construct additional pipeline that could utilize existing water supplies. Therefore, implementation of the Project would not result in an increase in direct energy consumption. The Project may result in an overall decrease in energy use, resulting from a decrease in groundwater pumping in the area. Therefore, the Project would not represent a substantial increase in

energy consumption or a wasteful, inefficient, or unnecessary use of energy. This is a less-than-significant impact.

The 2014 EIR concluded that construction and implementation of BMP Update components would result in increased temporary and ongoing energy demand. However, based on the limited size and energy demand required for each component and the adequacy of electricity delivery systems, this represents a less-than-significant impact, and no mitigation is required.

b) Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? ***No Impact.***

The Project would provide supplemental sources of agricultural irrigation water to reduce groundwater pumping and resultant saltwater intrusion into the Pajaro River Valley. There would be no additional energy requirements for pumping existing surface water to the Project area. Although there are a number of regulations supporting changes in agricultural energy use, there are none that require specific energy reductions. The proposed project will be dependent on water pumped from existing supplemental water supplies (described above), and would benefit from future water supply projects such as the proposed College Lake project, but the Project does not include pumping facilities. Therefore, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to energy resources than previously disclosed in the 2014 EIR. No new mitigation is necessary.

3.7 GEOLOGY AND SOILS

Impacts related to geology, soils, and seismicity were discussed in Section 8.2, Geology, Soils and Seismicity, of the 1999 EIR and Section 3.7, Geology and Soils, of the 2014 EIR.

3.7.1 Environmental Setting

The Project is located in an area with high seismic activity dominated by the San Andreas Fault Zone. The San Andreas Fault system, forming the boundary between the North American Plate and the Pacific crustal plates, is expressed as a series of northwest trending faults. The nearest known earthquake faults include the san Andreas Fault approximately 7.5 miles northeast, the Zayante Fault approximately 5 miles northeast, and the Ben Lomond Fault approximately 12 miles northwest. The Project does not cross any fault zones.[13] Many individual faults of the San Andreas Fault System have produced strong earthquakes in the past and are expected to do so in the future.

The Project area is generally flat with slightly undulating terrain. The area has deep alluvial soils comprised of younger (Holocene) flood plain deposits consisting of unconsolidated, relatively fine-grained, heterogeneous deposits of sand and silt and commonly including relatively thin, discontinuous layers of clay. Manresa Beach Aeolian deposits are widely distributed south of the Pajaro River floodplain and Sunset Beach Eolian deposits are distributed to the north. These deposits are somewhat older Pleistocene deposits of dune origin. Soils are comprised of Baywood sandy loam and Elder sandy

[13] County of Santa Cruz. 2019. Santa Cruz County GISWeb. Available online at: https://gis.santacruzcounty.us/gisweb/. Accessed August 14, 2019.

loam.[14] These soils are very deep and well-drained, have slight or slight-to-moderate erosion potential, moderate wind-driven erosion potential, low liquefaction risk, and are not expansive.[15]

3.7.2 Impacts and Mitigation

a) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42? ***No Impact.***

As the closest mapped earthquake fault is located approximately 5 miles from the Project area, there is no chance of direct damage to the Project from rupture of a known earthquake fault. No impact would occur.

ii) Strong seismic ground shaking? ***Less-than-Significant Impact with Mitigation Incorporated.***

Groundshaking is an unavoidable hazard for facilities in the San Francisco Bay, Santa Cruz, and Monterey Bay region. The degree of hazard depends, in part, on the seismic hazards of the site and partly on the type of structure, its materials, and construction quality. The effects of groundshaking on specific soil types along the pipeline alignments would determine the behavior of the pipeline during an earthquake. Similar to the projects assessed in the 1999 EIR, earthquake groundshaking likely would occur at some time over the life of the Project and damage to some systems, as well as service disruptions, should be expected. Potential impacts during a seismic event include loosening of pipeline joints resulting in leaks and breaks, which may result in soil wash-out and sinkholes. Groundshaking hazards are unavoidable, but through adequate mitigation, as discussed below, the risk of injury and loss of life due to an earthquake can be reduced to a less-than-significant level. The purpose of the mitigation is to reduce the potential for injury and the length of service interruptions during and after a seismic event. Mitigation Measure 8.2.3-5 has been clarified to specify applicable codes and criteria.

Impact 8.2.3-5 (1999 EIR): Large earthquakes would be expected to damage the proposed facilities, impairing or disrupting their intended operations. Significant. The impact can be reduced to as acceptable level of risk through engineering design, and therefore, reduced to a less than significant impact.

Mitigation Measure 8.2.3-5 (1999 EIR): ~~Conduct geologic investigations of the proposed pipeline alignment and pumping facilities prior to the final design and~~ The Project shall implement design recommendations from the geologic investigations conducted in 2006. ~~The investigations should specify hazards related to ground movements and co-seismic efforts, especially liquefaction.~~ The recommendations of the~~an~~ engineering geologist shall be incorporated into the design and specifications and shall be implemented by the construction contractor. The construction manager shall conduct inspections and verify~~certify~~ that all applicable design criteria have been met. While these measures would not ensure that damage to the facilities would not occur, it would ensure that the hazards have been reduced to an acceptable level of risk, and, therefore, the impact would be reduced to a less than significant level.

[14] U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 2019. Web Soil Survey. Available online at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed August 15, 2019.
[15] County of Santa Cruz. 2019. Santa Cruz County GISWeb. Available online at: https://gis.santacruzcounty.us/gisweb/. Accessed August 14, 2019

iii) Seismic-related ground failure, including liquefaction? ***Less-than-Significant Impact with Mitigation Incorporated.***

Although the Project area has a high potential for seismic activity, the soils underlying the Project area have low liquefaction potential. Although soils underlying the Project have a low risk for liquefaction, as discussed above, potential impacts during a seismic event may include loosening of pipeline joints resulting in leaks and breaks, which may result in soil wash-out and sinkholes. This would be a potentially significant impact. Implementation of Mitigation Measure 8.2.3-5, conducting a geotechnical analysis of the Project, would reduce impacts related to ground failure to a less-than-significant level.

iv) Landslides? ***No Impact.***

The area encompassing the Project site is generally flat with slightly undulating terrain. The Project is not located in an area with landslide potential.[16] No impact would occur.

b) Would the Project result in substantial soil erosion or the loss of topsoil? ***Less-than-Significant Impact with Mitigation Incorporated.***

The soils underlying the Project are comprised of Baywood sandy loam and Elder sandy loam with slopes ranging from 0 to 30%.[17] Both types of soils have low erosion potential, but do have potential for wind-driven erosion if not covered.

Similar to the project assessed in the 1999 EIR, the proposed Project would be located in flat areas with soils having primarily low to moderate erosion hazard. However, the operation of construction equipment and vehicles, trench excavation, and soil stockpiling would expose loose soils to erosion if construction occurs in the rainy season or with high winds. Soil erosion can be significant and result in Project delays due to required soil restabilization, regrading, and soil removal from drainage structures. In addition, the Project has the potential to disrupt erosion control measures put in place by the landowners.

Construction activities would involve grading, which would cover an approximately 27.4-acre work area. Approximately 18,900 cubic yards of bedding and pipe zone material would be imported, in addition to reuse of native material and replacement of the first top 18 inches of topsoil. Approximately 10,600 cubic yards of excess material from trench excavation would be disposed of off-site. The potential impacts would be similar due to the underlying soil type, site topography, and mitigation requirements. With implementation of standard erosion control measures and practices as set forth in identified mitigation measures, potential impacts would remain less than significant. Mitigation Measures 8.2.3-1a, 8.2.3-1b, and 8.2.3-1e have been modified to reflect Project site conditions, and new measure GEO-1 is identified to better protect farmland soils. Mitigation Measure 8.2.3-1f includes additional clarification to reference the specific Project and the Project SWPPP.

Impact 8.2.3-1 (1999 EIR): Construction of the proposed pipelines would result in accelerated erosion and attendant loss of soil resources and effects of sediment discharges in water courses. The impact would be significant on slopes over 2% and in areas with soils having moderate or greater <u>wind</u> erosion hazard, which includes the entire area of the coastal distribution system. Significant. With mitigation identified in this EIR, this impact would be reduced to a less than significant level.

[16] County of Santa Cruz. 2019. Santa Cruz County GISWeb. Available online at: https://gis.santacruzcounty.us/gisweb/. Accessed August 14, 2019.
[17] U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 2019. Web Soil Survey. Available online at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed August 15, 2019

Mitigation Measure 8.2.3-1a (1999 EIR): All grading and construction shall conform to requirements of the ~~Monterey and~~ Santa Cruz County Grading Ordinance.

Mitigation Measure 8.2.3-1b (1999 EIR): Site grading and construction work areas shall be expose as little new ground surface as possible. Vegetation should be left intact to the extent practical outside of areas supporting agriculture and roadways.

~~Mitigation Measure 8.2.3-1c (1999 EIR): To the extent possible, grading activities in non-cropped areas shall be limited to the period between April 1 and October 31. If dry conditions persist after October 31, one week extensions of grading activities should be obtained from the County Public Works Department. In areas where the soil is tilled, grading activities should be coordinated with local farmers to ensure consistency between their erosion control and farming practices and construction disturbance.~~

Mitigation Measure 8.2.3-1d (1999 EIR): Implement best construction practices at all grading sites, regardless of soil erodibility.

Mitigation Measure 8.2.3-1e (1999 EIR): Upon completion of construction within non-agricultural areas ~~at all sites~~, loose soils shall be removed or spread and all non-agricultural areas shall be re-soiled ~~and reseeded~~ to ensure that a stable soils cover will remain. Re-seeding with an in-kind seed mix shall occur in natural areas affected by the Project.

Mitigation Measure 8.2.3-1f (1999 EIR): ~~PVWMA~~Contractor should prepare and implement an inspection and maintenance program during construction for the right-of-way and all facility sites per the SWPPP. The plan should include routine inspection plans and reporting, and prescriptive methods for correcting erosion or soil instability problems as outlined in the project SWPPP.

Mitigation Measure GEO-1 (New): Within agricultural areas, the contractor will be required to stockpile, segregate, and cover the top 18 inches of topsoil from each individual parcel adjacent to the trench and replace it after the trench has been backfilled. Topsoil shall be stockpiled separate from subsoils, and covered to prevent topsoil loss and erosion by wind or rain. Topsoil shall be replaced within the top 18 inches of fill material to be replaced following pipe installation.

Implementation of Mitigation measures 8.2.3-1a through 8.2.3-1f and GEO-1 would ensure soil erosion hazards are minimized and the impact would be reduced to less than significant.

c) *Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?* ***Less-than-Significant Impact.***

The 1999 EIR considered potential damages to proposed facilities and pipelines due to soil conditions. The soil hazards affecting the Project would remain the same as compared to the previously approved projects because construction would occur in the same general area, and within the same identified soils. The sandy loam soils that underlie the Project have low susceptibility to landslide, liquefaction, or settlement. The majority of the Project area is located on slopes of 0 to 15%. The Project area is not located in a Santa Cruz geologic hazard overlay area for general landslide or liquefaction hazard.[18] Therefore impacts related to soil strength would be less than significant. Implementation of geotechnical report in Mitigation Measure 8.2.3-5 would further reduce this less-than-significant impact.

[18] County of Santa Cruz. 2019. Santa Cruz County GISWeb. Available online at: https://gis.santacruzcounty.us/gisweb/. Accessed August 14, 2019.

Impact 8.2.3-4 (2014 EIR): Proposed pipelines on the Pajaro floodplain pass through areas with ~~Clear Lake clay~~ Baywood and Elder sandy loam soils that are ~~weak~~ relatively strong soils, not subject to settlement or expansion~~, expansive soils and potentially corrosive soils~~ that could damage the proposed facilities. Less than Significant. With mitigation identified in this EIR, this impact would be further reduced to a less than significant level.

Mitigation Measure 8.2.3-4 (2014 EIR): ~~Conduct soil engineering investigations of the proposed pipeline alignment and pumping facilities prior to the final design and~~ The Project shall implement design recommendations from the soil engineering investigations conducted in 2006. ~~The investigations will specify hazards related to weak soils and settlement, including differential settlement.~~ The recommendations of the~~an~~ engineering geologist shall be incorporated into the design and specifications and shall be implemented by the construction contractor. The construction manager shall conduct inspections and verify ~~certify~~ that all applicable design criteria have been met. While these measures would not ensure that some damage to the facilities would not occur, it would ensure that design standards have been met and the hazards have been reduced to an acceptable level of risk. Therefore, the impact would be further reduced to a less than significant level.

d) Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? ***Less-than-Significant Impact.***

The 1999 EIR considered potential damages to proposed facilities and pipelines due to soil conditions including shrink-swell capability (expansive behavior). Shrink-swell behavior in soils could adversely impact subsurface pipelines by exerting additional pressures on below-grade facilities, producing shrinkage cracks that allow water infiltration and compromise the integrity of backfill material. Soil in expansion or contraction could lead to undue lateral pipeline stress and stress of structural joints. Lateral stresses could, over time, lead to pipeline rupture or leaks in the coupling joints. Shrinkage cracks could form in native soils adjacent to the pipeline trench or in backfill material if expansive soils are used. If shrinkage cracks extend to sufficient depths, groundwater can infiltrate into the trench, causing piping (progressive erosion of soil particles along flow paths) or settlement failure of the backfill materials. Settlement failure can also occur if expansive soils are used in backfill and undergo continued expansion and contraction. Over time these soils could settle, resulting in misalignment or damage to buried facilities.

The soils underlying the Project are sandy loams that have little-to-no shrink-swell potential. The contractor would be responsible for ensuring that engineered fill used for pipeline construction has low shrink-swell potential. Therefore, impacts related to expansive soils would be less than significant. Mitigation Measure 8.2.3-4, implementation of soil engineering investigations, would further reduce this less-than-significant impact.

e) Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? ***No Impact.***

The proposed Project would construct irrigation pipelines and does not include a wastewater disposal system. No impact would occur.

f) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ***No Impact***

A review of geological maps indicates that the Project area is underlain by Eolian deposits of Menresa Beach and Eolian deposits of Sunset Beach.[19] These are alluvium and marine deposits and have no observed unique paleontological or geologic resources. Thus, based on the depth and area of disturbance, implementation of the proposed Project is not expected to result in direct or indirect impacts to any paleontological features.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts related to geology, soils, and seismicity than previously disclosed in the 1999 EIR and 2014 EIR.

3.8 GREENHOUSE GAS EMISSIONS

Section 8.7 of the 1999 EIR analyzed potential air quality impacts associated with the CDS. At the time, a GHG emissions analysis was not required. Section 3.3 of the 2014 EIR analyzed potential air quality and GHG emissions.

Gases that trap heat in the atmosphere are referred to as GHGs since they have effects that are analogous to the way in which a greenhouse retains heat. GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere affects the earth's temperature. The State of California has undertaken initiatives designed to address the effects of GHG emissions and to establish targets and emission reduction strategies for GHG emissions in California. At the time of preparation of the 1999 EIR, an evaluation of potential impacts related to GHG emissions was not required under CEQA; however, this issue was substantively addressed in the 2014 EIR. Courts have subsequently held that GHGs do not constitute "new information" for purposes of an addendum analysis if the certified EIR was completed, as the 1999 EIR was here, before the State CEQA Guidelines required an analysis of GHG emissions and/or climate change.

3.8.1 Environmental Setting

Global Climate Change & Greenhouse Gases. The natural process through which heat is retained in the atmosphere is called the greenhouse effect. The greenhouse effect traps heat in the atmosphere through a threefold process as follows: shortwave radiation emitted by the sun is absorbed by the earth; the earth emits a portion of this energy in the form of longwave radiation; and GHGs in the upper atmosphere absorb this longwave radiation and emit this longwave radiation into space and toward the earth. This trapping of the longwave (thermal) radiation emitted back toward the earth is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and carbon dioxide (CO_2). Many other trace gases have greater ability to absorb and re-radiate longwave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-radiate longwave radiation. The GWP of a gas is determined using CO_2 as the reference gas. The CARB recommends use of the Intergovernmental Panel on Climate Change's (IPCC) Third Assessment Report[20] as the source for the GWP due to the use of those GWPs for their regulatory programs.

[19] County of Santa Cruz. 2019. Santa Cruz County GISWeb. Available online at: https://gis.santacruzcounty.us/gisweb/. Accessed August 14, 2019.
[20] Intergovernmental Panel on Climate Change. 2001. *Third Assessment Report.* Available online at: https://www.ipcc.ch/assessment-report/ar3/. Accessed August 22, 2019.

3.8.2 Impacts and Mitigation

a) Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ***Less-than-Significant Impact.***

The MBARD GHG threshold is defined in terms of carbon dioxide equivalents (CO_2e), a metric that accounts for the emissions from various GHGs based on their GWP. A project would have a significant impact on the environment if it would emit more than 10,000 metric tons per year (MT/yr) of CO2e.[21] The Project would not generate GHG emissions during operation; any quantifiable emissions would occur during construction. Based on the size and scope of the Project, construction GHG emissions would be well below the threshold level of 10,000 MT/yr. A CalEEMod analysis for the K1 Pipeline Project EIR Addendum calculated that project would emit approximately 203.60 MT/yr. The K1 Pipeline Project was approximately half the size of the proposed Project; therefore, the proposed Project would be expected to generate approximately 407 MT/yr CO_2e and would not exceed the threshold for GHG emissions. This impact would be less than significant.

b) Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ***No Impact.***

The proposed Project would comply with all CARB and MBARD requirements for vehicle registration and emissions. These regulations include the Portable Equipment Registration (PERP) Program and the EPA and CARB's Tier 3 standard for off-road vehicles. The Contractor would ensure that vehicles and equipment meet CARB and MBARD requirements, including that all portable equipment be registered with the MBARD and display PERP stickers, and that all off-road diesel engines meet the Tier 3 standards. Therefore, no impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to GHG emissions than previously disclosed in the 2014 EIR. No new mitigation is necessary.

3.9 HAZARDS AND HAZARDOUS MATERIALS

Impacts related to hazards and hazardous materials were discussed in Section 3.8, Hazards and Hazardous Materials, of the 2014 EIR. The 1999 EIR did not analyze impacts related to hazards.

3.9.1 Environmental Setting

The Pajaro Valley is comprised of an urban center, surrounded by agricultural lands. Industrial uses within Watsonville are generally concentrated in the areas along Highway 129 between Highway 1 and Main Street.

In order to determine the potential for hazardous materials contamination in the Project area, the California Department of Toxic Substances Control's EnviroStor database was consulted. EnviroStor's database identifies contaminated sites within California, as well as facilities that process or transfer toxic waste, based on geographic area. The database includes federally designated sites, state response sites, military sites, school sites and voluntary cleanup sites. Each identified entry in the database contains a report showing the site's current address, past contaminating uses, history of the site, current and

[21] Monterey Bay Air Resources District (MBARD). 2016. *Air District Guidelines for Implementing the California Environmental Quality Act.* Available online at: https://www.mbard.org/files/50d38962a/Attachment_Guidelines-for-Implementing-CEQA.pdf. Accessed August16, 2019.

historical toxic substances present, land use restrictions, and cleanup status. No hazardous cleanup sites or leaking underground storage tanks were identified in the project area.

3.9.2 Impacts and Mitigation

a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? ***Less-than-Significant Impact.***

Construction of the proposed Project would involve the transport, use, and disposal of hazardous materials in small quantities, including hazardous liquid materials such as fuel. The transportation, storage, and use of hazardous materials would be regulated by applicable federal, state, and local laws to avoid significant hazards. Operation of the proposed Project would not involve the use of hazardous materials. As a result, hazardous materials would not pose a threat to the environment or people during construction of the proposed Project. Therefore, impacts would be less than significant.

b) Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ***Less-than-Significant Impact with Mitigation Incorporated.***

The proposed Project is located in an active agricultural area. Agricultural land may contain soils that have been contaminated with pesticide residuals and pesticide-related metals arsenic, lead, and mercury. Similar to the project addressed in the 2014 EIR, disturbance of soils during construction could result in the release of these substances, which represents a potentially significant impact. Mitigation Measure HM-1 would apply, ensuring potential impacts remain at less-than-significant levels.

Impact HM-1 (2014 EIR): Construction of the Project ~~BMP Update components~~ could potentially release hazardous materials from the disturbance/removal of soils used for agricultural purposes that may contain pesticide residuals. ~~In addition, Construction of the BMP Update components (i.e., excavation for pipelines) could potentially release hazardous materials in areas of potential soil contamination such as those identified by DTSC.~~ This is a potentially significant impact that would be reduced to a less-than-significant level with mitigation identified below.

Mitigation Measure HM-1 (2014 EIR): ~~Prior to initiation of earthwork activities, PVWMA shall perform soil testing on agricultural sites proposed for development and analytically test for pesticide residuals and pesticide-related metals arsenic, lead, and mercury. If contamination is identified in the soil samples above applicable levels, PVWMA~~ Contractor shall prepare a Site Management Plan (SMP) to establish protocols/guidelines for ~~the contractor~~ construction in potentially contaminated agricultural soils including: identification of appropriate health and safety measures while working in potentially contaminated agricultural soils; soil reuse; handling, and disposal of any contaminated soils; and agency notification requirements. The SMP shall include appropriate protection measures and personal protective equipment including, but not limited to, worker access to Material Safety Data Sheets, wearing gloves, and controlling visible dust. ~~The SMP shall be subject to the review and approval of the appropriate regulatory agency.~~

c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ***No Impact.***

The Project is not located within 0.25 mile of any school. Monterey Bay Academy is located 0.3 mile west of the Project and Monterey Bay Horsemanship and Therapeutic Center is located 0.45 mile west of

the Project. Therefore, the Project would not emit or handle hazardous materials within 0.25 mile of an existing school. No impact would occur.

d) Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ***No Impact.***

The Pajaro Valley is comprised of an urban center, surrounded by agricultural lands. Industrial uses within Watsonville are generally concentrated in the areas along Highway 129 between Highway 1 and Main Street. The Project area is located approximately 1.7 miles west of Watsonville and is surrounded by agricultural operations. In order to determine the potential for hazardous materials contamination in the Project area, the California Department of Toxic Substances Control's EnviroStor database was consulted. The results of the EnviroStor search showed no hazard or cleanup sites in the Project area. Therefore, the Project is not located on or near a hazardous material site and no impact would occur.

e) Would the Project for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? ***Less-than-Significant Impact.***

The Watsonville Municipal Airport is the only public municipal airport in Santa Cruz County, and is located approximately 2.5 miles northeast of the Project area. The Project is not located within the airport land use plan for the Watsonville Municipal Airport.

There is one private airport approximately 0.6 mile west of the Project. The airport is owned by the Seventh Day Adventist Church and located on the Monterey Bay Academy campus. This is a small day-use only airport for small aircraft. It is managed by Ocean Shore Aviation and includes one grass runway.[22] Work areas for the proposed Project are far enough from airport operations that construction workers would not be impacted by airport noise or hazards. Therefore, this impact would be less than significant.

f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ***Less-than-Significant Impact with Mitigation Incorporated.***

The majority of improvements associated with the proposed Project do not include construction within public roadway right-of-way and, therefore, would not affect general vehicle or emergency access on public roadways. Construction for the pipeline would cross Sunset Beach Road and would cross San Andreas Road in two places.

Similar to the project assessed in the 2014 EIR and 1999 EIR, minimal impacts to access to properties along the construction route due to trenching and materials and equipment storage would be expected. However, potential temporary blockage or reduction in private agricultural access road accessibility could result in delays to emergency services, which would be a potentially significant impact. However, PV Water or its contractors would work with affected jurisdictions (County Service Area [CSA] 45 Santa Cruz County Fire and Santa Cruz County Sheriff) to minimize disruptions to emergency access. These mitigation measures would reduce impacts to an emergency response plan or emergency evacuation plan to a less-than-significant level.

[22] FunPlacestoFly.com. 2019. Monterey Bay Academy Webpage. Available online at: https://www.funplacestofly.com/Airport-Info-Monterey-Bay-Academy-California. Accessed August 19, 2019.

Impact 8.6.3-2 (1999 EIR): Project construction would increase traffic delays for vehicles traveling past the construction zone. Significant. With mitigation identified in this EIR the impact would be reduced to less than significant levels.

Mitigation Measure 4.6.3-3a (1999 EIR): Construction trenches shall be covered by steel trench plates to allow access to driveways.

Mitigation Measure 4.6.3-3b (1999 EIR): To minimize disruption of emergency vehicle access, contractors will work with affected jurisdictions in (Santa Cruz ~~or Monterey~~ County ~~or City of Watsonville)~~ to identify detours during construction as needed.

Mitigation Measure 4.6.3-3c (1999 EIR): The Contractor shall contact ~~P~~police, fire, and emergency services ~~shall be notified of~~ regarding the timing, location, and duration of construction activities and the locations of detours and lane closures.

g) Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? ***No Impact.***

The Project would expand the existing CDS agricultural irrigation pipeline system and is located in an area of low fire danger. Therefore, the Project would not expose people or structures to risk from wildland fires, and no impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts related to hazards and hazardous materials than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.10 HYDROLOGY AND WATER QUALITY

Impacts related to hydrology and water quality were discussed in Section 8.3, Hydrology and Water Quality, of the 1999 EIR, and Section 3.9, Hydrology and Water Quality, of the 2014 EIR analyzed potential impacts related to hydrology and water quality associated with the CDS.

3.10.1 Environmental Setting

Groundwater Hydrology: The Project area is underlain by the Pajaro Valley Subbasin of the Corralitos Groundwater Basin. Since the 1940s, pumping has exceeded total usable flow in the Pajaro Valley Basin, resulting in groundwater overdraft. Overdraft conditions have caused groundwater levels to drop below sea level allowing sea water intrusion to occur. In 2001, the sustainable yield (the rate at which groundwater can be withdrawn without causing long-term decline of the water table) was modeled and estimated to be approximately 24,000 afy. The model results indicated that the sustainable yield could be increased to 48,000 afy by eliminating pumping at the coast and replacing the groundwater supply with water originating from a different source, which would create a hydrostatic barrier to prevent seawater intrusion.[23]

In 2005 PV Water contracted the U.S. Geological Survey (USGS) to develop a hydrologic model of the basin. The Pajaro Valley Hydrologic Model, using MODFLOW with the Farm Process, is capable of being accurate at seasonal to interannual time frames and subregional to valley-wide spatial scales for the

[23] California Department of Water Resources. 2006. *California's Groundwater Bulletin 118. Central Coast Hydrologic Region Pajaro Valley Groundwater Basin.* Available online at : https://water.ca.gov/LegacyFiles/pubs/groundwater/bulletin_118/basindescriptions/3-2.pdf. Accessed August 18, 2019.

assessment of the groundwater hydrologic budget for water years 1964 to 2009, as well as potential assessment of the BMP components and sustainability analysis of conjunctive use. The model provides a good representation of the regional flow system and the use and movement of water throughout the valley. The simulated long-term imbalance between inflows and outflows indicates overdraft of the groundwater basin averaging about 12,950 afy over the 46-year period of water years (1964 to 2009). Annual overdraft varies considerably from year to year, depending on land use, pumpage, and climate conditions. Climatically driven factors can affect inflows, outflows, and water use by as much as a factor of two between wet and dry years. Coastal inflows and outflows vary by year and by aquifer; the net coastal inflow, or seawater intrusion, ranges from about 1,000 to more than 6,000 afy.[24]

In September 2014, Governor Brown signed into law the Sustainable Groundwater Management Act. It requires identified critically overdrafted groundwater basins (including the Pajaro Valley Basin) become sustainable by 2040. In 2017 PV Water voted to become the Groundwater Sustainability Agency responsible for the Pajaro Valley Basin. In 2019 the California Department of Water Resources approved PV Water's BMP as a functionally equivalent alternative to a Groundwater Sustainability Plan for the Pajaro Valley Basin.[25] PV Water's BMP, adopted in 2014, includes a suite of projects to stop seawater intrusion and basin overdraft, including sending surface water through various facilities to the CDS.

Surface Hydrology: The proposed Project is located in the Central Coast Hydrologic Region and is surrounded by the Pacific Ocean approximately 0.5 mile to the west; Watsonville Slough and the Pajaro River approximately 0.7 and 1.6 miles to the south, respectively; Harkins Slough and Galligans Slough approximately 0.3 mile to the east; and unnamed streams approximately 1.5 miles to the north. The Project is located in the San Andreas and Watson Slough watersheds. The Project is generally bounded by agricultural lands.

3.10.2 Impacts and Mitigation

a) Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? ***Less-than-Significant Impact with Mitigation Incorporated.***

The proposed Project would require construction proximate to several irrigation channels. It would cross one irrigation channel on the west side of San Andreas Road. The pipeline alignments would be configured to avoid crossing other irrigation channels. The Project would involve earthmoving activities such as excavation, trenching, and soil stockpiling. The Project would not be located any closer to surface waters than what was assessed in the 1999 EIR for the CDS, which included crossing the Pajaro River. The Project site is relatively flat and drains to Watsonville Slough and Monterey Bay.

Project construction activities that could result in erosion and subsequent impacts to water quality include excavation, dewatering, and soil stockpiling. Excavation dewatering can produce high volumes of water containing silts that, when introduced to surface water bodies or storm drain systems, can cause excessive sedimentation and high turbidity. Runoff from stockpiled soils can increase sediment loads in stormwater discharges that increase sedimentation and impact surface water quality. In addition to sediment, use of fuels, solvents, and other chemicals used in construction activities would be spilled or leak, and ultimately seep into waterways.

[24] Pajaro Valley Water Management Agency (PV Water). 2019. Hydrologic Modeling Webpage. Available online at: https://www.pvwater.org/hydrologic-modeling. Accessed August 18, 2019.

[25] Pajaro Valley Water Management Agency (PV Water). 2019. Sustainable Groundwater Management Webpage. Available online at: https://www.pvwater.org/sgm. Accessed August 8, 2019.

Similar to the projects assessed in the 1999 EIR, construction activities would include implementation of best management practices for erosion control along the pipeline routes. Excavation and construction of pipelines requiring open trenches may intercept shallow groundwater requiring dewatering to locally lower groundwater levels to dry the area for construction. The impact would be local and temporary and, therefore, is considered to be less than significant. In the event trench dewatering is required, the water would be handled by a National Pollutant Discharge Elimination System (NPDES) permit if required by the Regional Water Quality Control Board (RWQCB). Incorporation of standard best management practices, as required under the Project SWPPP and identified in mitigation measures presented below would reduce potential impacts to less-than-significant levels. Mitigation Measures 4.3.3-1 and 4.3.3-1b have been replaced by new measure HYD-1, and Mitigation Measure 4.3.3-2 has been modified to address current stormwater management requirements specific to the Project.

Impact 8.3.3-1 (1999 EIR): Construction activities would increase soil erosion and may transport other contaminants to downstream receiving waters. Significant. With mitigation identified in this EIR the impact would be less than significant.

~~*Mitigation Measure 4.3.3-1 (1999 EIR): Employ construction storm water quality management practices.*~~

~~*The agency shall prepare a Storm Water Pollution Prevention Plan as part of the construction activities National Pollutant Discharge Elimination System (NPDES) storm water permit required by the RWQCB. At a minimum, this plan shall include the following requirements:*~~

~~*1. Plan excavation and grading activities for only the dry season (April 15 to October 31) to the extent possible. This reduces the chance of severe erosion from intense rainfall and surface runoff, as well as the potential for soil saturation in swale areas.*~~

~~*2. If excavation occurs during the rainy season, storm runoff from the construction area shall be regulated by temporary on-site silt traps and/or basins with multiple discharge points to natural drainages and energy dissipaters. Stockpiles of loose material shall be covered and runoff all be diverted away from exposed soil material. If work is stopped due to rains, a positive grading away from slopes shall be provided to carry the surface runoff to areas where flow can be controlled, such as the temporary silt basins. Sediment basin/traps shall be located and operated to prevent off site sediment transport. Any trapped sediment shall be removed from the basin or trap and placed at a suitable location on-site away from concentrated flows, or removed to an approved disposal site.*~~

~~*3. Temporary erosion control measures shall be provided until perennial revegetation or landscaping is established and can prevent discharge of sediment into nearby waterways. For construction within 500 feet of a water body, straw bales shall be placed upstream adjacent to the water body.*~~

~~*4. After completion of grading, erosion protection shall be provided on all cut and fill slopes. Revegetation shall be facilitated by mulching, hydroseeding or other methods, and should be initiated as soon as possible after completion of grading, and prior to the onset of the rainy season (by November 1).*~~

~~*5. Permanent revegetation/landscaping shall emphasize drought-tolerant perennial ground coverings, shrubs, and trees, to improve the probability of slope and soil stabilization without adverse impacts to slope stability due to irrigation infiltration and long-term root development.*~~

~~*6. BMPs selected and implemented for the project shall be in place and operational prior to the onset of major earthwork on the site. The construction phase facilities shall be maintained regularly and cleared of accumulated sediment as necessary.*~~

~~*7. Hazardous materials such as fuels and solvents used on the construction sites shall be stored in covered containers and protected from vandalism. A stockpile of spill cleanup materials shall be readily available at all construction sites. Employees shall be trained in spill prevention and cleanup and individuals shall be designated as responsible for prevention and cleanup activities.*~~

~~*8. Other measures as described in Mitigation Measure 4.4.3-1 b- Implement Standard Protective Measures to Maintain Water Quality and Control Erosion and Sedimentation.*~~

~~*Mitigation Measure 4.4.3-1b (1999 EIR): Implement Standard Protective Measures to Maintain Water Quality and Control Erosion and Sedimentation: Standard measures to maintain water quality and to control erosion and sedimentation are recommended:*~~

~~*• Restrict trenching across all waterways to low-flow periods.*~~

~~*• Exclude water from around the section of trench that is within the actively flowing channels. This will further reduce the potential for sediment or other pollutants to enter the waterways and impact downstream resources. The diversion will consist of water pillows, rock, sandbags, or other structural methods deemed most effective by the project Engineer.*~~

~~*• Place sediment curtains downstream of the construction zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone.*~~

~~*• Locate spoil sites so they do not drain directly into the waterways. If a spoil site drains into a channel, catch basins will be constructed to intercept sediment before it reaches the channels. Spoil sites will be graded to reduce the potential for erosion.*~~

~~*• Prepare and implement a spill prevention plan for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching the creek channels.*~~

~~*• Store equipment and materials away from the waterways, outside existing levees or at least 50 feet from waterways, but within the pipeline right-of-way. No equipment or materials shall be deposited within 100 feet of wetlands.*~~

~~*• Provide proper and timely maintenance for vehicles and equipment used during construction to reduce the potential for mechanical breakdowns leading to a spill of materials into or around the creeks. Maintenance and fueling will be conducted in an area that meets the criteria set forth in the spill prevention plan (i.e., away from the creeks).*~~

Mitigation Measure 4.3.3-2 (1999 EIR): The contractor would be required to ~~O~~obtain an NPDES permit for construction dewatering if required by the RWQCB and implement conditions of the permit. An NPDES permit will be required from the RWQCB for all discharges to waters of the State for construction dewatering. Discharges must meet water quality objectives specified by the RWQCB ~~in the Basin Management Plan as described in Section 3.3~~. The RWQCB may require certain conditions of the permit, such as treatment of the flows prior to discharge.

Mitigation Measure HYD-1 (New): Employ construction stormwater quality best management practices.

PV Water shall require contractors to develop a SWPPP in compliance with the 2009-0009 DWQ Construction General Permit requirements for construction of proposed pipeline facilities, as required by the State Water Resources Control Board. The objectives of the SWPPP are to identify pollutant sources

that may affect the quality of stormwater discharge and to identify, assign, and implement control measures and management practices to reduce pollutants in stormwater discharges. The SWPPP for this proposed action would include the implementation, at a minimum, of the following elements:

Source Identification: The SWPPP shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or which may result in non-storm water discharges from the facility.

a. *A topographic map (or other acceptable map if a topographic map is unavailable), extending 0.25 mile beyond the property boundaries of the facility showing: the pipeline alignment, surface water bodies (including springs and wells), and the discharge point(s) where storm water discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.*

b. *A site map showing the following:*

    1) *Storm water conveyance, drainage, and discharge structures;*

    2) *An outline of the storm water drainage areas for each storm water discharge point;*

    3) *Paved areas and buildings;*

    4) *Areas of actual or potential pollutant contact with storm water or release to storm water, including but not limited to outdoor storage and process areas; material loading, unloading, and access areas; and waste treatment, storage, and disposal areas;*

    5) *Location of existing storm water structural control measures (i.e., berms, coverings, etc.);*

    6) *Surface water locations, including springs and wetlands; and*

    7) *Vehicle service areas.*

c. *A narrative description of the following:*

    1) *Pipeline alignment;*

    2) *Materials, equipment, and vehicle management practices employed to minimize contact of significant materials of concern with storm water discharges;*

    3) *Material storage, loading, unloading, and access areas;*

    4) *Existing structural and non-structural control measures (if any) to reduce pollutants in storm water discharges; and*

    5) *Methods of on-site storage and disposal of significant materials.*

d. *A list of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities.*

Similar to the project assessed in the 1999 EIR, the proposed Project would not result in significant operational impacts to water quality due to sedimentation and erosion, because the areas within the temporary and permanent easements would return to agricultural production and agricultural road use following construction and maintenance activities. Non-agricultural areas would be restored following Project construction and maintenance activities.

Implementation of the recent 2014 BMP Update, and implementation of the Project, would increase the alternative types of water available to blend with recycled water and therefore, would have a beneficial impact on delivered water quality and crop yields, and a less-than-significant impact on surface and

groundwater quality. Continued compliance with Title 22 requirements, Central Coast RWQCB reclamation permits, and PV Water's and the City of Watsonville's ongoing monitoring and adaptive management of the CDS ensure that surface waters are protected, and that potential impacts to surface or groundwater quality would remain less than significant. Therefore, no mitigation measures are necessary specific to the proposed Project.

b) Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? ***No Impact.***

The F Line Project is designed to provide approximately 2,600 afy of supplemental irrigation water to a 1,300 irrigated acres extension of the existing 5,100-acre delivered water service area. As part of the approved Groundwater Management Plan, the Project would increase the acreage that can be irrigated with supplemental water supplies and decrease groundwater pumping for irrigation. The substitution of pumped groundwater with water delivered by the CDS for irrigation would in part reduce the current overdraft of the basin, reduce seawater intrusion, and would improve basin management, and therefore is a beneficial impact on groundwater supplies.

c) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site? ***Less-than-Significant Impact.***

The Project would construct approximately 2.9 miles of distribution piping and 15 agricultural turnouts. Permanent aboveground improvements would include agricultural turnouts (aboveground piping and appurtenances and a concrete manhole riser), flow isolation valves, air release valve enclosures, and blow-off structures. These improvements would not substantially alter the existing drainage patterns of the site. Following the completion of construction, disturbed areas would be stabilized, and topsoil would be replaced in the agricultural fields. Non-agricultural areas disturbed by construction would be revegetated by the contractor in accordance with the approved SWPPP. Therefore, permanent impacts to site drainage patterns would be less than significant.

Temporary construction impacts related to erosion and siltation could be potentially significant, but would be mitigated by the implementation of a SWPPP, which would be prepared by the contractor as part of the Project and is discussed in Mitigation Measure HYD-1, above. Implementation of the SWPPP would reduce construction impacts to a less-than-significant level.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite? ***No Impact.***

The Project would not construct aboveground facilities that would substantially increase the rate or amount of surface runoff. No impact would occur.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? ***No Impact.***

The Project would not construct aboveground facilities that would create or contribute runoff water to storm drains. No impact would occur.

iv) impede or redirect flood flows? ***No Impact.***

The Project would not construct aboveground facilities that would impede or redirect flood flows. No impact would occur.

d) Would the Project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? ***No Impact.***

The Project is not located in a Federal Emergency Management Agency (FEMA) flood hazard zone or near a large body of water that would be a seiche hazard. It is approximately 0.5 mile east of the tsunami wet zone for Monterey Bay[26] Therefore, the Project would not risk release of pollutants due to Project inundation. No impact would occur.

e) Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? ***No Impact.***

The Project represents a piece of the BMP, which is the functional equivalent Groundwater Sustainability Plan for the Pajaro Valley Basin. The purpose of the CDS is to reduce groundwater pumping of coastal agricultural areas, thereby reducing seawater intrusion into the Pajaro Valley Basin. The proposed Project would branch off the CDS to provide irrigation water to an additional 1,300 acres that are currently irrigated with groundwater. Therefore, the Project would support and be beneficial to the sustainable groundwater management plan. No impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts related to hydrology and water quality than previously disclosed in the 1999 EIR and 2014 EIR.

3.11 LAND USE AND PLANNING

Section 8.1, Land Use and Planning, of the 1999 EIR and Section 3.2, Agriculture and Land Use, of the 2014 EIR analyzed potential impacts related to land use associated with the CDS.

3.11.1 Environmental Setting

The proposed local water supply facilities are located in the San Andreas Planning Area of unincorporated Santa Cruz County. All properties in the Project area are zoned for agricultural use.

3.11.2 Impacts and Mitigation

a) Would the Project physically divide an established community? ***No Impact.***

The Project would construct approximately 2.9 miles of new underground irrigation pipeline, which would branch off the existing CDS to provide irrigation water to an additional 1,300 acres of agricultural land. The Project would support existing agricultural operations and would not divide an established community. No impact would occur.

[26] County of Santa Cruz. 2019. Santa Cruz County GISWeb. Available online at: https://gis.santacruzcounty.us/gisweb/. Accessed August 14, 2019.

b) Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? ***No Impact.***

The 1999 EIR determined that the CDS would not be incompatible with existing uses in the vicinity, which include agricultural production, scattered residences and agricultural accessory structures, and agricultural roads. The construction of pipelines could temporarily constrain access to adjacent farmlands along roadways. Similar to the proposed Project, these disruptions would be temporary and would not be expected to substantially impair agricultural operations. Mitigation identified in the 1999 EIR required advance notification of affected property owners and residents, which would be applicable to the proposed Project. Mitigation Measure 4.1.3-1 was been clarified to identify affected property owners, residents, and businesses proximate to the Project.

Impact 8.1.3-1 (1999 EIR): Construction of the proposed coastal distribution system could result in short-term disturbance of adjacent land uses. Less than Significant.

Mitigation Measure 4.1.3-1 (1999 EIR): PV Water will provide ~~A~~advance notification of construction ~~activities should be provided~~ to all property owners, residents, and businesses with property contiguous to the planned ~~in the vicinity of~~ construction areas.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to land use and planning than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.12 MINERAL RESOURCES

Mineral resources were not addressed in either the 1999 EIR or the 2014 EIR. Both documents recognized that there are no significant mineral resources in the Project area.

3.12.1 Environmental Setting

The Project is located in an agricultural area with no identified mineral resources.[27]

3.12.2 Impacts and Mitigation

a) Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? ***No Impact.***

The Project is not located in an area with mineral resources identified by the state.[28] No impact would occur.

[27] County of Santa Cruz. 2019. Santa Cruz County GISWeb. Available online at: https://gis.santacruzcounty.us/gisweb/. Accessed August 14, 2019.

[28] California Department of Conservation. 1987. *Mineral Resource Zones and Resource Sectors. Santa Cruz and Southern Santa Clara Counties. Monterey Bay Production-Consumption Region. Plate 4.2.* Available online at: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sr/SR_146-4/SR-146_Plate_4.2.pdf. Accessed August 18, 2019.

b) Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? ***No Impact.***

The Project is not located in an area with County-identified mineral resources.[29] No impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to mineral resources than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.13 NOISE

Section 3.10, Noise and Vibration, of the 2014 EIR analyzed potential impacts related to noise associated with the CDS. Section 4.1, Land Use and Planning, of the 1999 EIR addresses disturbance of land uses during construction but does not specifically discuss noise.

3.13.1 Environmental Setting

The Project would be constructed within agricultural lands and fields. Existing noise sources in the area consist of agricultural operations and traffic along San Andreas Road, Dairy Road, McQuaide Road, and Sunset Beach Road. The Project site is located in a sparsely populated agricultural area. Single-family residences and agricultural accessory structures are located in the vicinity of the Project alignment. Five residences are located between approximately 110 feet and 300 feet from the Project area along San Andreas Road and an unnamed agricultural road off San Andreas Road. These residences are located adjacent to existing agricultural fields and proximate to large agricultural processing facilities. These residences are considered sensitive receptors; however, they are currently subjected to noise, dust, odors, and other conditions present within agriculturally dominant areas.

There are no other sensitive receptors within 0.25 mile of the Project. Sunset State Beach is located approximately 0.28 mile west of the Project, Monterey Bay Academy is located approximately 0.3 mile northwest of the Project, and Monterey Bay Horsemanship and Therapeutic Center is located approximately 0.45 mile west of the Project, and Manresa State Beach is located approximately 2.4 miles northwest of the Project.

The Santa Cruz County Municipal Code prohibits offensive noise between the hours of 10:00 p.m. and 8:00 a.m. Offensive noise during day and evening hours is defined as noise that is "Clearly discernible at a distance of 150 feet from the property line of the property from which it is broadcast; or in excess of 75 decibels at the edge of the property line of the property from which the sound is broadcast." Offensive noise during nighttime hours is defined as noise that is "Clearly discernible at a distance of 100 feet from the property line of the property from which it is broadcast; or in excess of 60 decibels at the edge of the property line of the property from which the sound is broadcast." These noise regulations apply to construction noise.[30]

[29] County of Santa Cruz. 2019. Santa Cruz County GISWeb. Available online at: https://gis.santacruzcounty.us/gisweb/. Accessed August 14, 2019.

[30] County of Santa Cruz. 1989. Santa Cruz County Municipal Code, Chapter 8.30, Noise. Available online at: https://www.codepublishing.com/CA/SantaCruzCounty/html/SantaCruzCounty08/SantaCruzCounty0830.html. Accessed August 19, 2019.

3.13.2 Impacts and Mitigation

a) Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? ***Less-than-Significant Impact.***

Construction of the proposed Project would intermittently and temporarily generate noise levels above existing ambient noise levels in the vicinity of each component. This impact would be less than significant, similar to project impacts resulting from pipeline construction, as assessed in the 2014 EIR. Implementation of proposed Construction Noise Minimization Practices, identified below, would further reduce this less-than-significant impact.

Construction activities for the first three phases of the project are expected to last approximately 18 months. Construction of Schedules D and E would occur at a later date, but would be expected to take a similar period of time. Construction would generally occur Monday through Friday, from 7:00 a.m. to 5:00 p.m., with some potential work on Saturdays. Trenching activities would require use of equipment similar to what is currently used within the existing agricultural fields, and construction activities near sensitive receptors would be brief. On average, pipeline construction would be expected to proceed at a rate of approximately 50 feet per day. Construction along any individual section of pipeline would be expected to last approximately 1 to 2 weeks. Construction activities are expected to generate between 5 and 20 vehicle trips per day. Construction of the pipeline could have significant short-term noise impacts on residents located along the alignment (including portions along San Andreas Road and an unnamed farm road). Based on the location of sensitive receptors near the pipeline alignment, persons at five residences may be affected by noise generated during construction. The noise effects would be of limited duration for any particular receptor. Therefore, the Project would have less-than-significant noise impacts that would be further reduced by implementation of the proposed Construction Noise Minimization Practices, described below, that would be included in the Project plans and specifications.

Impact 3.10.3.1 (2014 EIR): Construction of the Project ~~BMP Update components~~ would intermittently and temporarily generate noise levels above existing ambient noise levels and potentially result in vibration in the vicinity of each component. This impact would be less-than-significant. Implementation of proposed Construction Noise Minimization Practices identified below, would further reduce this less-than-significant impact.

Construction Noise Minimization Practices (2014 EIR):

- *Contractors shall comply with Santa Cruz County~~all local~~ sound control and noise level rules and regulations, and shall notify residents and businesses within ¼ mile of the construction site prior to commencing construction activities.*
- *Equipment and trucks used for construction activities shall utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts.*
- *Impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for construction activities shall be hydraulically- or electrically-powered whenever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a*

reduction of 5 dBA. Quieter procedures shall be used (such as drilling rather than impact equipment) whenever feasible.

- *Stationary noise and vibration sources shall be located as far from sensitive receptors as possible. If they must be located near existing receptors, they shall be adequately muffled.*
- *Temporary walls may be erected at some locations to reduce noise impacts to residences adjacent to construction sites.*
- *Construction activities generating noise shall be limited to the hours of 8 a.m. to 5 p.m., Monday through Saturday.*

Operation of the proposed Project would not result in an additional or incremental increase in ambient noise levels in the vicinity. Therefore, no operational impact would occur.

b) Would the Project result in generation of excessive groundborne vibration or groundborne noise levels? ***Less-than-Significant Impact.***

For purposes of this analysis, excessive groundborne vibration that might result in a significant impact would be 0.2 inches per second, which is the level at which vibration would cause damage to masonry and wood timber buildings, and which is recommended as the "architectural damage risk level for continuous vibration" by Caltrans and the U.S. Department of Transportation ("Transportation Related Earthborne Vibrations"[31] and "Transit Noise and Vibration Impact Assessment"[32]. Construction of the proposed Project would generate groundborne vibration. Vibratory compactors or rollers can generate perceptible vibration. Heavy trucks can also generate groundborne vibration, which varies depending on vehicle type, weight, and pavement conditions. The Federal Transit Authority has published standard vibration levels and peak particle velocities for construction equipment operations.

Vibration levels from construction equipment attenuate as they radiate from the source. Construction would include construction activities such as loaded trucks, which experiences the greatest peak particle velocity values from construction equipment. At a reference distance of 25 feet from the source, a loaded truck produces peak particle velocities of approximately 0.076 inch per second and a large bulldozer produces peak particle velocities of approximately 0.089 inch per second. This vibration level would attenuate to approximately 0.01 inch per second, which would be barely perceptible and would be well under the threshold of 0.2 inch per second. Vibration levels due to construction activities would be below levels that could cause damage to structures, would not result in prolonged interference for sensitive receptors, and would be barely perceptible. For these reasons, construction vibration impacts would remain less than significant. The construction noise minimization practices under impact (a), above, would further reduce these less-than-significant impacts.

Operation of proposed Project would not result in additional vibration during operation. Therefore, no operational impact would occur.

[31] California Department of Transportation (Caltrans). 2002. *Transportation Related Earthborne Vibrations.*
[32] U.S. Department of Transportation. 2006. *Transit Noise and Vibration Impact Assessment.*

c) Would the Project, for a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? ***Less-than-Significant Impact.***

The Watsonville Municipal Airport is the only public municipal airport in Santa Cruz County and is located approximately 2.5 miles northeast of the Project area. The Project is not located within the airport land use plan for the Watsonville Municipal Airport.

There is one private airport approximately 0.6 mile west of the Project. The airport is owned by the Seventh Day Adventist Church and located on the Monterey Bay Academy campus. This is a small day-use only airport for small aircraft. It is managed by Ocean Shore Aviation and includes one grass runway.[33] Work areas for the proposed Project are far enough from airport operations that construction workers would not be impacted by airport noise; therefore, this impact would be less than significant.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts related to noise than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.14 POPULATION AND HOUSING

Population and housing were not analyzed in the 1999 EIR or the 2014 EIR because both projects were focused on agricultural water supply, and therefore had no impact on population or housing.

3.14.1 Environmental Setting

The Project is located in an agricultural area of unincorporated Santa Cruz County. The majority of the land is dedicated to agricultural operations with a few farmhouses in the area.

3.14.2 Impacts and Mitigation

a) Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? ***No Impact.***

The Project would construct underground agricultural irrigation pipeline in an agricultural area. It would have no effect on population growth, either directly or indirectly. No impact would occur.

b) Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? ***No Impact.***

The Project would construct underground agricultural irrigation pipeline in an agricultural area. It would not displace either existing people or existing housing. No impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to population and housing than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

[33] FunPlacestoFly.com. 2019. Monterey Bay Academy Webpage. Available online at: https://www.funplacestofly.com/Airport-Info-Monterey-Bay-Academy-California. Accessed August 19, 2019.

3.15 PUBLIC SERVICES

Section 8.8, Socioeconomics and Public Services, of the 1999 EIR and Section 3.6, Energy, Utilities and Service, of the 2014 EIR analyzed potential impacts to public services associated with the CDS. Similar to the 1999 EIR, demand during construction for public services such as law enforcement, emergency response, and schools would not be large enough to cause significant impacts.

3.15.1 Environmental Setting

The Project is located in unincorporated Santa Cruz County, west of the City of Watsonville and south of the community of La Selva Beach. It has law enforcement coverage from the Santa Cruz County Sheriff, and fire and emergency services are provided by CSA 48 Santa Cruz County Fire and Pajaro Valley Fire Protection District.[34]

3.15.2 Impacts and Mitigation

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection? ***Less-than-Significant Impact with Mitigation Incorporated.***

The proposed Project has the potential to generate a short-term increase in demand for police and fire services if an accident occurs as a result of public hazards associated with the Project: traffic congestion and rough road conditions, open trenches, and operation of heavy construction equipment. In addition, public services may be requested related to non-emergency situations, such as theft, vandalism, and nuisance complaints. Such activities may require response from fire units. Construction activities for all facilities could require short-term police and fire protection services to assist in traffic management or respond to construction accidents and other service requests. Mitigation Measures 4.6.3-3a, 4.6.3-3b, and 4.6.3-3c (1999 EIR) (see Section 3.9, Hazards and Hazardous Materials) would reduce impacts to a less-than-significant level. Impact 4.8.2-2 has been modified to reflect impacts to emergency services.

Impact 4.8.2-2 (1999 EIR): Pipeline construction could temporarily impede vehicle access to emergency services ~~as well as to collection and delivery services~~. This impact could affect Counties' Sheriff's Departments, fire departments and~~,~~ emergency services (e.g. ambulance companies)~~, delivery and collection services~~. Significant. Mitigation measures in this EIR would reduce impacts to a less than significant level.

Impact 4.8.2-3 (1999 EIR): Construction activities for all facilities could require short-term police and fire protection services to assist in traffic management or respond to construction accidents and other service requests. This impact is less than significant.

ii) Police protection? ***Less-than-Significant Impact with Mitigation Incorporated.***

As discussed under fire protection, above, the proposed Project has the potential to generate a short-term increase in demand for police services if an accident occurs, or related to non-emergency situations, such

[34] County of Santa Cruz. 2019. Santa Cruz County GISWeb. Available online at: https://gis.santacruzcounty.us/gisweb/. Accessed August 14, 2019.

as theft, vandalism, and nuisance complaints. Impacts 4.8.2-2 and 4.8.2-3, from the 1999 EIR, apply to police as well as fire and emergency services. Mitigation Measures 4.6.3-3a, 4.6.3-3b, and 4.6.3-3c (1999 EIR) (see Section 3.9, Hazards and Hazardous Materials) would reduce impacts to a less-than-significant level.

iii) Schools? ***No Impact.***

The Project would construct irrigation pipeline in an agricultural area. It would have no impacts to school enrollments or schools.

iv) Parks? ***No Impact.***

The Project would construct irrigation pipeline in an agricultural area. It would have no impacts on parks or park facilities.

v) Other public facilities? ***No Impact.***

The Project would construct irrigation pipeline in an agricultural area. It would have no additional impacts to government facilities.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to public services than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.16 RECREATION

Section 8.9, Visual and Recreation, of the 1999 EIR and Section 3.6, Energy, Utilities and Service, of the 2014 EIR analyzed potential impacts to recreation associated with the CDS.

3.16.1 Environmental Setting

San Andreas Road is a designated bicycle path in the Project area. There are no parks or recreation areas located within 0.25 mile of the Project. The nearest parks include Sunset State Beach (0.28 miles southwest), Manresa Uplands Campground (1.0 mile northwest), Santa Cruz/Monterey Bay Kampgrounds of America (KOA) Campground (1.25 miles north), and Manresa State Beach (2.4 miles northwest). Santa Cruz/Monterey Bay KOA Campground is on San Andreas Road at Spring Valley Road, which is a construction haul route for the Project. None of the other parks are located in the vicinity of haul routes.

3.16.2 Impacts and Mitigation

a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? ***Less-than-Significant Impact.***

Similar to the CDS analyzed in the 1999 EIR, construction activities may affect recreational resources and bicyclists in the area. Potential construction-related impacts due to the use of heavy equipment on local roadways are addressed in Section 3.17, Transportation. Implementation of Mitigation Measures 4.6.3-2b, 4.6.3-4, 4.6.3-5a, and 4.6.3-5b would further reduce this less-than-significant impact.

Impact 8.9.3-2 (1999 EIR): Development of the Project ~~coastal distribution system component~~ would temporarily disrupt recreational uses along the designated recreational bicycle trail~~s~~ on San Andreas Road in Santa Cruz ~~and Monterey County~~ County~~ies~~. Less than significant.

Mitigation Measure 4.6.3-2b (1999 EIR): The construction contractor shall prepare traffic safety and control plans to show specific methods for maintaining traffic flows. This shall include roadway locations where special trenching techniques would be used to minimize impacts to traffic flow and operations~~, and rail operations~~. The traffic control plan shall be reviewed for appropriateness and approved by ~~Caltrans and~~ the ~~governing~~ Santa Cruz County Public Works Department~~s~~.

Mitigation Measure 4.6.3-4 (1999 EIR): Conduct a preconstruction survey of road conditions on key access routes to the project site. The pavement conditions of local streets judged to be in good condition for use by heavy trucks traffic will be monitored. Roads damaged by construction shall be repaired to a condition equal to, or better than, that which existing prior to construction activity.

Mitigation Measure 4.6.3-5a (1999 EIR): The traffic control pans prepared by the contractor (see Mitigation Measure 4.6.3-2b) shall include recommended detours for bicyclists.

Mitigation Measure 4.6.3-5b (1999 EIR): The contractor shall provide advanced public notification of construction activity and roadway/access closures.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? ***No Impact.***

The Project would construct agricultural irrigation pipelines and would not require the construction or expansion of new recreational facilities. No impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to recreation resources than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.17 TRANSPORTATION

Impacts related to transportation were discussed in Section 8.6, Traffic and Circulation, of the 1999 EIR, and Section 3.11, Transportation and Traffic, of the 2014 EIR analyzed potential impacts related to traffic and transportation associated with the CDS.

3.17.1 Environmental Setting

The Project site is located west of Highway 1 along the west and east side of San Andreas Road and along a number of unnamed farm roads in unincorporated Santa Cruz County. Public roadways that may be affected by construction of the Project include San Andreas Road, Sunset Beach Road, and several unnamed farm roads. Access to the Project site would be from San Andreas Road, several existing unnamed roads off of San Andreas Road, and unpaved, 20-foot-wide agricultural roads. These roads would provide direct access to the pipeline alignment, temporary construction easements, and staging areas. The Project area is governed by the Santa Cruz County Regional Transportation Plan [35] and the

[35] Santa Cruz County Regional Transportation Commission. 2018. *2040 Regional Transportation Plan.* Available online at: https://sccrtc.org/funding-planning/long-range-plans/rtp/2040-plan/. Accessed August 22, 2019.

Circulation Element of the Santa Cruz County General Plan[36]. There is one policy in the Circulation Element that relates to the proposed Project.

Circulation Element. Policy 3.9.4 Maintenance*. Require that contractors and utility companies doing roadside work maintain the road edge in the best possible condition during construction and, upon project completion, improve the road shoulder to the pre-construction condition or better.*

3.17.2 Impacts and Mitigation

a) Would the Project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? ***Less-than-Significant Impact with Mitigation Incorporated.***

Similar to the project assessed in the 1999 EIR, construction activities for the proposed Project would generate short-term traffic increases associated with the following activities: trucks hauling equipment and materials to the site; trucks hauling excavated materials from the site; trucks importing new fill to the site; and the daily arrival/departure of construction workers to the site.

Construction of the Project is anticipated to generate approximately 5 to 20 daily trips over 15 months. This includes transport of equipment and materials, trips generated by construction managers and personnel, approximately 530 round trips to export 10,600 cubic yards of soil (20-cubic yard haul trucks) and approximately 445 round trips to import 8,900 cubic yards of pipe zone material (assumes 20-cubic yard haul truck). This estimate is similar to the construction trip generation estimates presented in the 1999 EIR. Based on the existing roadway network in the Project area, truck and construction worker vehicle traffic are assumed to use a combination of public facilities to travel to/from the site, including Highway 1, West Beach Street, Buena Vista Drive, and San Andreas Road in the immediate proximity. Trench excavations would cross Sunset Beach Road, San Andreas Road (twice), and unnamed farm roads. Construction may require the temporary intermittent closure(s) of San Andreas (paved) and Sunset Beach Road (paved), as well as some unnamed farm roads. A traffic control plan would be implemented by the contractor as part of the Project to allow for traffic to continue to flow around the Project site. No new temporary or permanent access roads are proposed to access the pipeline. Construction worker parking and storage of materials would be located within identified staging areas.

Construction of the proposed improvements would be temporary, and therefore, would not result in any long-term degradation in operating conditions or level of service for roadways. The primary off-site impacts from the movement of construction trucks would include short-term and intermittent reduction of roadway capacities due to slower movements and larger turning radii of the trucks compared to passenger vehicles. The temporary increase in daily vehicular trips from the movement of equipment and materials to and from the site, as well as construction workers, would account for small increases in daily traffic volumes on the nearby highways, including Highways 1 and 152, and would fall within the daily fluctuations of traffic and, therefore, would not significantly disrupt daily traffic flow on freeways and arterials. The effect of Project traffic on roadways with lower traffic volumes, including San Andreas Road, would be greater. The temporary increase in construction-generated trucks on Project area roadways would interact with other vehicles, including other large trucks, slow-moving agricultural vehicles, and recreational traffic (e.g., from nearby beaches). This area receives substantial summer tourist traffic. Potential conflicts also could occur between construction traffic and bicyclists and

[36] County of Santa Cruz. 1994. *1994 General Plan/Local Coastal Program. Chapter 3, Circulation.* County of Santa Cruz Planning Department. Available online at: http://www.sccoplanning.com/Portals/2/County/userfiles/106/GP_Chapter%203_Circulation.pdf. Accessed August 22, 2019.

pedestrians. However, given the anticipated pace of construction, the duration that Project haul trucks would be required to use any given local roadway would be relatively brief.

Most Project-related hauling and deliveries would be dispersed throughout the day, thus lessening the effect on peak-hour traffic. Project truck traffic occurring during the hours of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. would coincide with peak-hour traffic, and, therefore, have the greatest potential to impede traffic flow during these time periods. Minimizing truck traffic during the morning and afternoon peak periods would further lessen disruption of traffic flow on affected roadways. PV Water would include this as part of the Construction Traffic Management Practices that would be incorporated into plans and contract specifications to minimize traffic and the associated effects on nearby roadways during construction.

Construction of the Project would temporarily increase traffic on area roadways from Project-generated vehicle trips by construction workers and construction vehicular activities. This impact would be less than significant with mitigation (Mitigation Measures .6.3-1a, 4.6.3-2a, 4.6.3-2b, 4.6.3-3b, 4.6.3-3c, and 4.6.3-5b) because the effects would be temporary, and the number of daily construction trips would be similar to what was assessed in the 1999 EIR.

Mitigation Measures 4.6.3-1a, 4.6.3-2a, 4.6.3-2b, 4, and 4.6.3-5b have been clarified below to better identify the location of the Project and traffic conditions that would be affected during Project construction. Mitigation Measures 4.6.3-3b, and 4.6.3-3c have been clarified above in Section 3.9, Hazards and Hazardous Materials.

Impact 8.6.3-1 (1999 EIR): Traffic on area roadways would increase as a result of project-generated vehicle trips by construction workers and construction vehicular activities. This impact would be less than significant.

Mitigation Measures 4.6.3-1a (1999 EIR): Schedule truck trips outside of peak commute hours to the extent possible.

Mitigation Measures 4.6.3-1b (1999 EIR): Use haul routes that minimize truck traffic on local roadways to the extent possible.

Mitigation Measure 4.6.3-2a (1999 EIR): Limit construction hours to off-peak traffic periods on commute streets to the extent possible.

Mitigation Measure 4.6.3-2b (1999 EIR): The construction contractor shall prepare traffic safety and control plans as required by the Santa Cruz County governing Public Works Department to show specific methods for maintaining traffic flows. This shall include identifying roadway locations where special trenching techniques would be used to minimize impacts to traffic flow and operations~~, and rail operations~~. The traffic control plan shall be reviewed for appropriateness, and approved by ~~Caltrans and~~ the Santa Cruz County~~governing~~ Public Works Department~~s~~.

Mitigation Measure 4.6.3-5b (1999 EIR): The contractor shall provide advanced public notification of construction activity and roadway/access closures.

Impact TR-1 (2014 EIR): Construction of BMP Update components would increase wear and tear on area roadways used by construction vehicles. With mitigation identified in this EIR, the impact would be reduced to a less-than-significant level.

Mitigation Measure TR-1 (2014 EIR): Conduct a preconstruction survey of road conditions on key access routes to the project sites (e.g., San Andreas Road). The pavement conditions of local streets judged to be

in good condition for use by heavy truck traffic shall be monitored. Roads damaged by construction shall be repaired to a structural condition equal to, or better than, that which existed prior to construction activity.

b) Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? ***No Impact.***

State CEQA Guidelines Section 15064.3 subdivision (b) contains criteria for analyzing transportation impacts. Projects that may have a significant impact include land use projects that result in an increase in vehicle miles traveled that exceed an applicable threshold of significance, and transportation projects that increase vehicle miles traveled. The proposed Project would construct agricultural irrigation pipeline in an agricultural area. It would have no permanent impact on travel patterns or vehicle miles traveled for residents, employees, or tourists in the area. No impact would occur.

c) Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ***No Impact.***

The Project would construct a series of underground irrigation pipelines. It does not include any design changes to local roads. No impact would occur.

d) Would the Project result in inadequate emergency access? ***Less-than-Significant Impact with Mitigation Incorporated.***

Improvements associated with the proposed Project include construction within public roadway right-of-way in three places. Anticipated trench excavations would be in County roads, agricultural fields, maintenance yards, and farm roads. Construction would cross Sunset Beach Road at San Andreas Road, and would cross San Andreas Road in two places—once opposite Sunset Beach Road and once approximately 0.53 mile north of Sunset Beach Road. Construction at road crossings would affect general vehicle and emergency access on public roadways. Similar to the project assessed in the 1999 EIR, minimal impacts to access to properties along the construction route from trenching, and materials and equipment storage would be expected. However, potential temporary blockage or reduction in private agricultural access and road accessibility could result in delays to emergency services. In addition, a temporary inconvenience to local agricultural businesses and residences could result. Mitigation Measures 4.6.3-3a, 4.6.3-3b, and 4.6.3-3c (1999 EIR) (see Section 3.9, Hazards and Hazardous Materials) would reduce impacts to a less-than-significant level.

Impact 8.6.3-2 (1999 EIR): Project construction would increase traffic delays for vehicles travelling past the construction zone. Significant. With mitigation identified in this EIR the impact would be reduced to less than significant levels.

Impact 8.6.3-3 (1999 EIR): Project construction would affect access to adjacent land uses for both general and emergency access. Significant. With mitigation identified in this EIR the impact would be reduced to less than significant levels.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to transportation than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.18 TRIBAL CULTURAL RESOURCES

Tribal Cultural Resources were discussed in part in Section 8.5, Cultural Resources, of the 1999 EIR and Section 3.5, Cultural Resources, of the 2014 EIR.

Assembly Bill (AB) 52 (2014) was passed and required an update to the State CEQA Guidelines to include questions related to tribal cultural resources. Changes to the State CEQA Guidelines were approved as part of the 2018 CEQA Update. This subject was partially addressed in the cultural resources sections in the 1999 EIR and the 2014 EIR; however, AB 52 required formal notice to local tribes as part of the CEQA process. On July 15, 2019, SWCA sent letters to the following organizations:

- Amah Mutsin Tribal Band,
- Amah Mutsin Tribal Band of Mission San Juan Bautista,
- Costanoan Ohlone Rumsen-Mutsun Tribe,
- Indian Canyon Mutsun Band of Costanoan, and
- Muwekma Ohlone Indian Tribe of SF Bay Area.

The letters notified each tribe of the proposed Project and requesting comments or questions on the Project. No responses were received.

3.18.1 Environmental Setting

The ethnographically documented aboriginal inhabitants of the project area were part of the Ohlone, or Costanoan, language group, which extended from the San Francisco Bay area south to the southern Monterey Bay and lower Salinas River areas. Ethnographic information regarding people in this group is obtained from records of early Spanish explorers, documents maintained at missions, the works of ethnographs and linguists, and from Native American descendants.

The Ohlone/Costanoan languages belong to the Utian family, of the Penutian language stock. Ohlone/Costonoan languages were spoken in a large area extending from the San Francisco Bay area, southward along the coast to Point Sur, and inland to the Diablo Range and portions of the northern San Joaquin Valley. Four groups are noted within the project area: Tiuvta, Unijaima, Motsun, and Ausaima. The Tiuvta were a tribelet within the Calendruc tribe that occupied the Pajaro River, Elkhorn Slough, and lower Salinas River areas. The Unijaima lived in the mountains and plains of southwestern Santa Clara Valley, north of the Pajaro River, while the Motsun lived in the San Juan Valley and in the mountains southwest of the valley. The Ausaima lived in the eastern portion of the San Felipe Sink and the hills on the west side of Pacheco Pass.[37]

3.18.2 Impacts and Mitigation

a) Would the Project would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? ***No Impact.***

No consultation requests were received from the identified local tribes. No impact would occur.

[37] Pajaro Valley Water Management Agency (PV Water). 2013. *Basin Management Plan Update Draft EIR.*

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? ***No Impact.***

No consultation requests were received from the identified local tribes. No impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to tribal cultural resources than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.19 UTILITIES AND SERVICE SYSTEMS

Impacts to utilities and service systems were analyzed in Section 8.8, Socioeconomics and Public Services, of the 1999 EIR, and Section 3.6, Energy, Utilities and Service Systems, of the 2014 EIR analyzed potential impacts related to utilities and service systems associated with the CDS.

3.19.1 Environmental Setting

Water. The City of Watsonville provides water to Watsonville and surrounding areas, including the areas of Freedom, Corralitos, Green Valley Road, Salispuedes, and Pajaro Dunes. The Pajaro/Sunny Mesa Community Services District (PSMCS) serves Pajaro and the surrounding communities of Sunny Mesa and Hillcrest Bay Farms. PV Water is responsible for managing water resources within the greater Pajaro Valley. The Soquel Creek Water District (SCWD) serves the City of Capitola and the unincorporated areas of Aptos in mid-Santa Cruz County and overlaps with the PV Water service area in the La Selva area.

Wastewater. The project area is located in a CSA Septic Maintenance District. There is no sewer service to the project area.

Storm Drainage. There are no storm sewers in the Project area.

Solid Waste. Santa Cruz County Recycling and Solid Waste Management is responsible for providing solid waste collection and disposal in Santa Cruz County.

3.19.2 Impacts and Mitigation

a) Would the Project require or result in the relocation or construction of new or expanded water wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? ***Less-than-Significant Impact with Mitigation Incorporated.***

The Project would construct irrigation pipeline as part of PV Water's BMP. It would transport irrigation water from other elements included in the BMP, but does not include new or expanded water supplies.

Based on the location of the proposed Project alignment, and review of information provided by PV Water, construction activities may encounter or disrupt existing underground utilities, similar to the projects assessed in the 1999 EIR. Underground utilities that were identified along the F line, F6 line and F8 line included:

F line:

- Tie-in to existing Harkins Slough Pipeline,
- Two gas line crossings
- Parallel irrigation and potable water lines
- One irrigation line crossing

F6 line:

- One gas line crossing
- One fiber-optic line crossing

F8 line:

- One gas line crossing
- One irrigation line crossing
- One fiber optic line crossing

The F1 line has no known utility crossings. The project also has a number of overhead electrical and telephone lines in the vicinity. Any service disruptions would be temporary. All known underground utilities would be located and potholed. There are no anticipated utility relocations. The potentially significant impact associated with potential damage to or interference with utilities would be reduced to a less-than-significant level with the implementation of identified mitigation. Mitigation Measure 4.8.2-1 has been modified to reflect actual conditions within the Project area.

Impact 4.8.2-1 (1999 EIR): Pipeline and/or facility construction could result in temporary, planned or accidental disruption to utility services provided by underground lines. Significant. Mitigation measures in this EIR would reduce this impact to a less than significant level.

Mitigation Measure 4.8.2-1 (1999 EIR): A detailed study identifying utilities along the proposed alignment ~~will be done~~was completed during the pre-design stages of the project. The following mitigations are required for segments identified in final design as having potential conflict with significant utilities.

a. *Utility excavations and encroachment permits would be required from the appropriate agencies, including the Public Works Department~~s~~ of Santa Cruz County and public and private utilities~~and Monterey Counties, Pacific Bell, U.S. Sprint, and PG&E, City of Watsonville, Caltrans, and UPRR~~. These permits include measures to minimize utility disruption. ~~PVWMA~~ PV Water and its contractors would comply with permit conditions. Permit requirements would be included in construction contract specifications.*

b. *Utility locations would be verified through field survey (potholing) and use of an underground locating service.*

c. ~~*A detailed engineering and construction plan would be prepared as part of the design plans and specifications. This*~~ *The construction plans should include procedures of excavation, support and fill of areas around utility cables and pipes. All affected utility services would be notified of ~~PVWMA~~PV Water's construction plans and schedule. Arrangements would be made with these entities regarding protection, relocation, or temporary disconnection of services.*

~~d. *In areas where the pipeline would parallel wastewater mains, engineering and construction plans will include trench wall support measures to guard against trench wall failure and possible resulting loss of structural support for the wastewater main.*~~

e. Residents and businesses in the project area would be notified by the contractor in writing of planned utility service disruption 2 to 4 days in advance in conformance with County and State standards.

The 1999 EIR identified a potentially significant impact resulting from damage to existing wells. Excavation, soil stockpiling activities, or construction equipment associated with pipeline construction may damage production, agricultural, or domestic supply well structures, especially sanitary seals of wells, or disturb well mounts, pump equipment, piping systems, or enclosures. Certain damage that would expose the well casing could lead to the introduction of contaminants such as sediments or chemicals into the groundwater. Damage to the well system, pump equipment, piping, or enclosures could temporarily stop proper well operation and interrupt water delivery. Mitigation Measure 6.3.3-5 has been clarified to be more specific to the Project area.

Impact 8.3.3-4 (1999 EIR): The proposed pipeline would be constructed adjacent to a number of wells. Construction activities could damage the wells or block access to the wells. Potentially significant. With mitigation identified in this EIR the impact would be less than significant.

Mitigation Measure 8.3.3-4 (1999 EIR): See Mitigation Measure 6.3.3-5 (1999 EIR). Avoid construction impacts to wells. The ~~precise~~ well locations shall be identified ~~in preconstruction surveys~~ on the design drawings, and any well not clearly visible in the field shall be marked in the field for avoidance. ~~The pipeline construction trench, material stockpile areas and soil excavation stockpiles shall be designated in the construction plans and specifications to specifically avoid impacting the well and access to the well.~~

b) Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? ***Less-than-Significant Impact***

Implementation of the recent 2014 BMP Update, and implementation of the Project, would increase the alternative types of irrigation water available to blend with recycled water and, therefore, would have a beneficial impact on water supplies. Continued compliance with Title 22 requirements, Central Coast RWQCB reclamation permits, and PV Water's and the City of Watsonville's ongoing monitoring and adaptive management of the CDS ensure that the water supply is used as efficiently as possible, and that potential impacts to water supplies would remain less than significant.

c) Would the Project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? ***No Impact.***

The Project would extend irrigation piping in an agricultural area. It would have no effect on wastewater utilities. No impact would occur.

d) Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? ***Less-than-Significant Impact with Mitigation Incorporated.***

Santa Cruz County Recycling and Solid Waste Management is responsible for providing solid waste collection and disposal in Santa Cruz County. They operate the Buena Vista Landfill and the Ben Lomond Transfer Station. Solid waste generated in the Pajaro Valley area would generally be disposed of at the Buena Vista Landfill. The Buena Vista Landfill is a Class III landfill operating under State of California Solid Waste Facilities Permit and accepts an average of 350 tons of solid waste per day. According to the California Department of Resources Recycling and Recovery (CalRecycle), the cease

operation date of the landfill is July 1, 2031; therefore, the landfill has less than 12 years of remaining capacity.[38] State law requires that counties and cities with less than 15 years of landfill space must investigate garbage disposal solutions. The County and the Cities of Scotts Valley, Capitola, Santa Cruz, and Watsonville have joined together to consider a variety of options for handling garbage disposal and recycling needs in the future, including continued waste reduction, non-disposal components such as large-scale composting or waste conversion technologies, and out-of-county disposal options. The Buena Vista Landfill accepts construction debris for recycling including sorted and clean concrete asphalt and rubble.

Construction of the proposed Project would require the disposal of up to 10,600 cubic yards at a landfill. Clean materials could be deposited at various locations available to PV Water; materials may be reused on-site, used for fill at another location, or sold. If determined to be hazardous (e.g., pesticide residuals, heavy metals), the material may require disposal at an approved facility.

Similar to the BMP Update analyzed in the 2014 EIR, if construction and demolition waste is disposed at the Buena Vista Landfill rather than reused, recycled, or deposited at an alternative facility, it could increase the disposal rate and possibly exceed the landfill's permitted daily tonnage, depending on the amount and timing of the delivery to the landfill. Given the limited capacity at the landfill, PV Water requires contractors to provide plans for recovering, reusing, and recycling construction, demolition, and excavation wastes and providing for composting of plant material, where feasible.

The potentially significant impact associated with landfill capacity would be reduced to a less-than-significant level with the implementation of identified mitigation. Impact ES-2 and Mitigation Measure ES-2 have been modified to reflect actual conditions within the Project area.

Impact ES-2 (2014 EIR): Construction of the Project ~~BMP Update components~~ could potentially impact solid waste landfill capacity, since the County's Buena Vista Landfill is approaching capacity. Although the Project is ~~BMP Update improvements are~~ expected to generate a relatively small amount of construction waste to be disposed of at the landfill, this is considered a significant impact due to limited landfill capacity. Mitigation is identified below to reduce the impact to a less-than-significant level.

Mitigation Measure ES-2 (2014 EIR): ~~PVWMA~~PV Water shall include in its construction specifications a requirement for the contractor to provide plans for recovering, reusing, and recycling construction, demolition, and excavation wastes and providing for composting of plant material, where feasible.

e) Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? ***Less-than-Significant Impact with Mitigation Incorporated.***

In 2005, the County Board of Supervisors passed a law banning disposal of recyclable materials in the Buena Vista Landfill. Banned materials include, but are not limited to scrap metal, yard waste and wood waste, concrete, and asphalt.[39] PV Water would require its contractors to provide plans for recovering, reusing, and recycling construction, demolition, and excavation wastes and providing for composting of plant material, where feasible. Therefore, the Project would comply with applicable regulations. With implementation of Mitigation Measure ES-2, above, this impact would be less than significant.

[38] California Department of Resources Recycling and Recovery (CalRecycle). 2018. SWIS Facility Detail. Buena Vista Landfill. Available online at: https://www2.calrecycle.ca.gov/swfacilities/Directory/44-AA-0004/. Accessed August 19, 2019.

[39] Santa Cruz County Municipal Code. 2019. Chapter 7.20. Section 145. Solid Waste. Disposal of recyclable materials prohibited. Available online at: https://www.codepublishing.com/CA/SantaCruzCounty/#!/SantaCruzCounty07/SantaCruzCounty0720.html. Accessed August 19, 2019.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts to utilities and service systems than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

3.20 WILDFIRE

The 1999 EIR and 2014 EIR did not analyze impacts from wildfire.

3.20.1 Environmental Setting

The Project area is located in a local responsibility area that is unzoned for fire hazard.[40] It is served by CSA 48 Santa Cruz County Fire. Surrounding land uses are irrigated agricultural fields and have low risk for fire hazard.

3.20.2 Impacts and Mitigation

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones,

a) Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan? ***No Impact.***

The Project area is located in a local responsibility area that is unzoned for fire hazard. Surrounding land uses are irrigated agricultural fields and have low risk for fire hazard. Therefore, no impact would occur.

b) Would the Project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? ***No Impact.***

The Project area is located in a local responsibility area that is unzoned for fire hazard. Surrounding land uses are irrigated agricultural fields and have low risk for fire hazard. Therefore, no impact would occur.

c) Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? ***No Impact.***

The Project area is located in a local responsibility area that is unzoned for fire hazard. Surrounding land uses are irrigated agricultural fields and have low risk for fire hazard. Therefore, no impact would occur.

d) Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? ***No Impact.***

The Project area is located in a local responsibility area that is unzoned for fire hazard. Surrounding land uses are irrigated agricultural fields and have low risk for fire hazard. Therefore, no impact would occur.

Conclusion: Implementation of the proposed Project would not result in new or more severe impacts related to wildfire than previously disclosed in the 1999 EIR and 2014 EIR. No new mitigation is necessary.

[40] California Department of Forestry and Fire Protection (CAL FIRE). 2007. Draft Fire Hazard Severity Zones in LRA. Santa Cruz County. Available online at: https://osfm.fire.ca.gov/media/6770/fhszl06_1_map44.pdf. Accessed August 19, 2019.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

The 1999 EIR and 2014 EIR included an assessment of cumulative impacts, growth-inducing impacts, secondary and indirect impacts, and compliance/consistency with applicable plans and policies. Based on the similarities between the project assessed in the 1999 EIR and 2014 EIR and the proposed Project, no modifications or additions to the analysis are necessary.

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Implementation of the proposed mitigation measures listed above in Section 3.4, Biological Resources, section will reduce the impacts to less than significant. Therefore, the Proposed Project will not substantially reduce habitat, reduce species populations, eliminate natural communities, or substantially reduce the number or range of rare or endangered plants or wildlife.

There are no identified paleontological and cultural resources in the project area. In the unlikely event that a previously unidentified cultural or paleontological resource is encountered during ground-disturbing activities, mitigation measures listed above in Section 3.5, Cultural Resources, will be implemented. Implementation these mitigation measures will prevent the proposed Project from eliminating important examples of the major periods of California history or prehistory.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

The proposed Project will contribute incrementally to cumulative impacts in the proposed Project area related to air quality, GHG emissions, and traffic; however, the proposed Project will be short term and will not contribute substantially to those cumulative impacts. Thus, the proposed Project will not have environmental effects that are individually limited but cumulatively considerable. Operation of the proposed Project will have a beneficial impact on groundwater levels in the project area.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The proposed Project will not adversely affect human beings, either directly or indirectly. Potential construction impacts associated with human health include the presence of hazards, hazardous materials use, and temporary air quality impacts. As discussed previously, construction impacts associated with air quality and with hazards and hazardous materials will be less than significant, consistent with the 1999 EIR and 2014 EIR. The proposed Project will have a beneficial effect on human beings in the project area by reducing seawater intrusion in the Pajaro Valley. Therefore, the impact is less than significant.

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CHAPTER 4. CONCLUSION

On the basis of the evaluation presented in Section 3 of this Addendum, the proposed changes would not trigger any of the conditions listed in Section 1 of this Addendum, requiring preparation of a subsequent or supplemental EIR. This Addendum satisfies the requirements of CEQA Guidelines Sections 15162 and 15164.

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APPENDIX A

Biological Resources Survey Report

Biological Resources Survey Report for the Coastal Distribution System F-Pipeline Project, Santa Cruz County, California

OCTOBER 2019

PREPARED FOR

Pajaro Valley Water Management Agency

PREPARED BY

SWCA Environmental Consultants

BIOLOGICAL RESOURCES SURVEY REPORT FOR THE COASTAL DISTRIBUTION SYSTEM F-PIPELINE PROJECT, SANTA CRUZ COUNTY, CALIFORNIA

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SWCA Project No. 53405

October 2019

EXECUTIVE SUMMARY

The Pajaro Valley Water Management Agency (PV Water) is proposing upgrades to the PV Water's Coastal Distribution System (CDS) and associated water supply facilities located in Santa Cruz County, California. The CDS F-Pipeline Project (F Line Project or Project) includes construction of a new pipeline (expansion to the existing CDS) that will allow the distribution of water to additional growers in Santa Cruz County via the expanded CDS. The Project is located in unincorporated Santa Cruz County approximately 3.7 miles southwest of the city of Watsonville. The Project is partially funded through an Integrated Regional Water Management Drought Emergency Grant from Proposition 84 – The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, issued through the California Department of Water Resources.

PV Water retained SWCA Environmental Consultant (SWCA) to provide environmental support services, including a biological resources survey and preparation of a Biological Resources Survey Report (BRSR) in support of the Project. The purpose of this BRSR is to document the biological resources within the Project biological study area (BSA). For the purposes of this report, the BSA consists of the Project footprint (Project area) and an adjacent 250-foot buffer. SWCA conducted a literature review of existing sources of information regarding occurrences of special-status species and sensitive resources near the BSA. Field surveys were conducted within the BSA to document biological resources, including a determination for the presence/absence of potentially jurisdictional wetlands and water features.

Based on the results of the literature review and field survey, the BSA contains one California Department of Fish and Wildlife (CDFW) sensitive natural community of concern: coastal and valley freshwater marsh. This feature is considered an environmentally sensitive habitat area (ESHA) per the California Coastal Commission (CCC), and is likely considered jurisdictional under the Regional Water Quality Control Board (RWQCB), CDFW, and/or the CCC. Seven additional wetlands or other waters were mapped in the BSA that are likely considered jurisdictional under the U.S. Army Corps of Engineers (USACE), RWQCB, CDFW, and/or the CCC, as well as considered ESHAs. The BSA also has potential to support three special-status plant species and five special-status wildlife species. No U.S. Fish and Wildlife Service (USFWS)-designated critical habitat is located within the BSA. Trees, shrubs, and buildings observed throughout the BSA provide suitable nesting and foraging habitat for nesting birds covered under the Migratory Bird Treaty Act and California Fish and Game Code.

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1 INTRODUCTION

The Pajaro Valley Water Management Agency (PV Water) is proposing upgrades to their Coastal Distribution System (CDS) and associated water supply facilities located in Santa Cruz County, California. The CDS F-Pipeline Project (F Line Project) includes construction of new pipelines (expansions to the existing CDS) that will allow the distribution of water to additional growers in Santa Cruz County via the expanded CDS. The Project is located approximately 3.7 miles southwest of the city of Watsonville within an unincorporated portion of Santa Cruz County. The Project is partially funded through an Integrated Regional Water Management Drought Emergency Grant from Proposition 84 – The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, issued through the California Department of Water Resources.

SWCA Environmental Consultant (SWCA) has prepared this Biological Resources Survey Report (BRSR) at the request of PV Water in support of the Project. The purpose of this BRSR is to document biological resources within the Project biological study area (BSA) and identify impacts that could occur from the proposed Project. Several previous environmental studies have been conducted for portions of the CDS (see Section 1.2, Project Background). This analysis is based on the review of current Project design drawings, relevant technical literature and resource databases, and previously completed environmental studies, taking into consideration biological resources such as sensitive habitats and special-status plant and wildlife species that are known to occur within a 5-mile vicinity of the Project. For those instances where potential impacts to sensitive biological resources may occur, SWCA has proposed avoidance and minimization measures (AMMs) and best management practices with the objective of avoiding or minimizing impacts.

1.1 Project Location

The Project area is located along San Andreas Road to the southwest of the city of Watsonville in Santa Cruz County, California (Figures 1 and 2). Situated on the U.S. Geological Survey (USGS) Watsonville West, California 7.5-minute topographic quadrangle map, the Project area is within Sections 11 and 14 of Township 12S and Range 01E. Elevations range between approximately 87 and 260 feet above mean sea level. The Pajaro River is approximately 1.65 miles southeast of the Project area.

The Project area encompasses the pipeline alignment and two proposed staging areas, which bisect portions of Assessor's Parcel Numbers (APN) 046-371-02, 046-151-19, 046-151-06, 046-151-28, 046-151-16, 046-201-16, 046-201-15, 046-201-20, 046-201-28, 046-151-37, 046-151-36, 046-201-17, 046-201-09, 046-201-25, 046-201-07, and 046-201-26. The Project area consists of predominately agricultural and associated land uses including irrigated fields, graded dirt roads, and water distribution infrastructure (e.g., existing wells, pipelines, pumps, similar appurtenances). Historically, the Project area has consisted of primarily agricultural uses dating at least as far back as 1931 (University of California, Santa Cruz [UCSC] 2015).

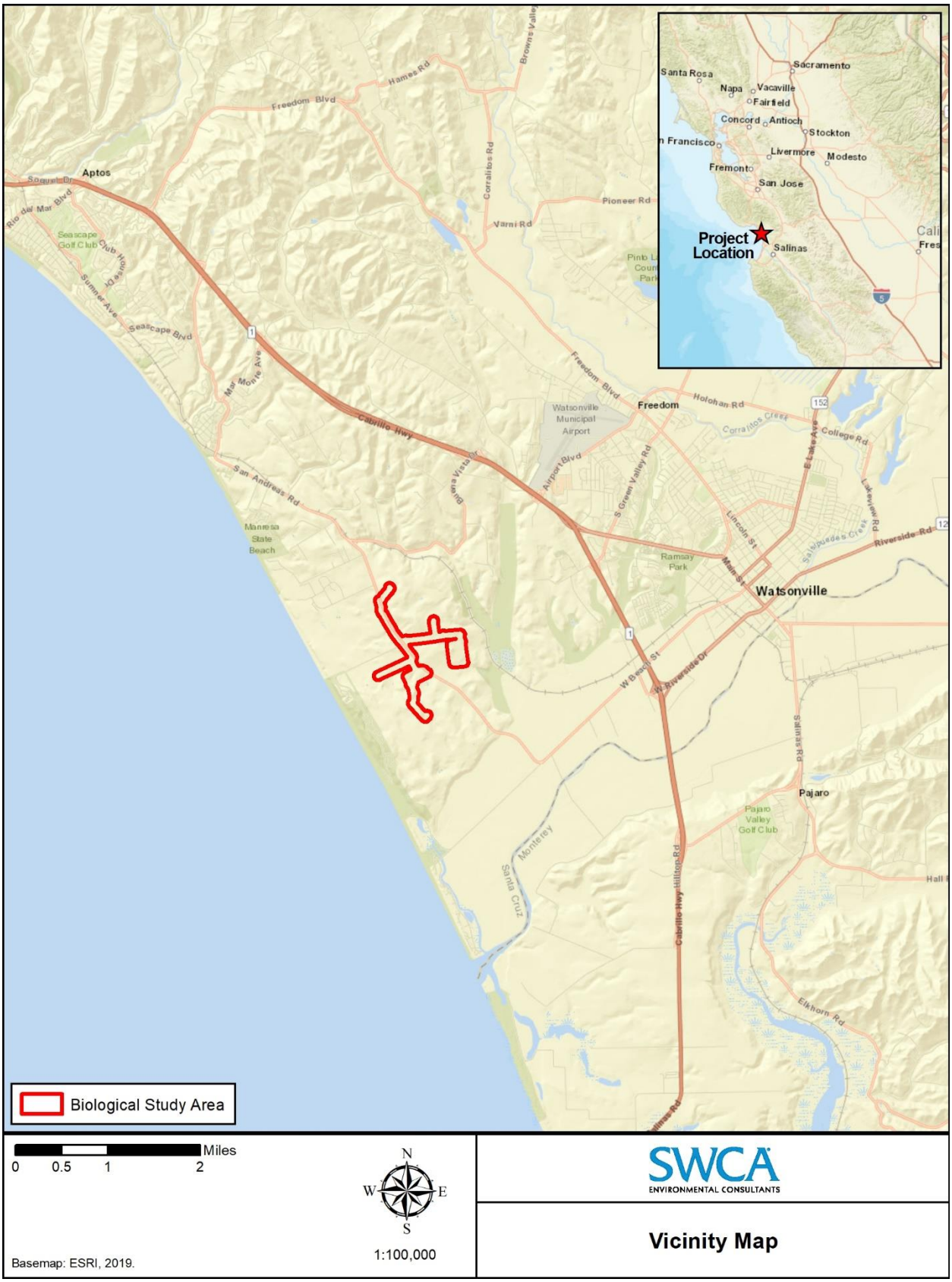

Figure 1. Vicinity map.

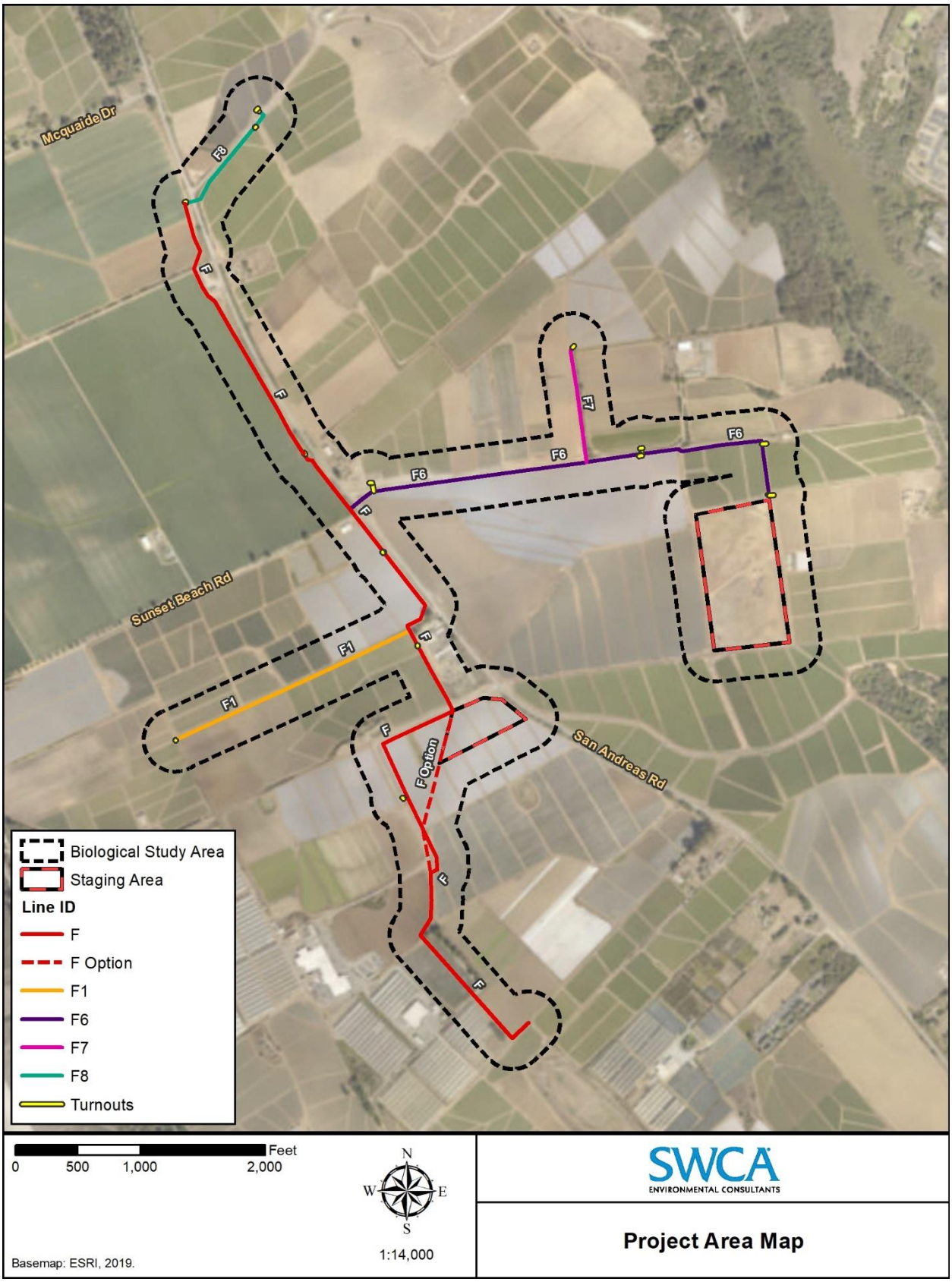

Figure 2. Project area map.

1.2 Project Background

PV Water was the lead agency in developing the PV Water Local Water Supply and Distribution Project Final Environmental Impact Report (FEIR) (State Clearinghouse #1997021006) (herein referred to as the 1999 EIR), which included a series of facility projects that would more fully utilize local water supply sources and distribute these sources (in addition to imported water) to service area users. The 1999 EIR found that the Local Water Supply and Distribution Project would have either no impact, less-than-significant impacts, or, with the implementation of mitigation measures, less-than-significant impacts to biological resources. PV Water was the lead agency in developing the PV Water Basin Management Plan (BMP) Update FEIR (State Clearinghouse #2000062030) (herein referred to as the 2014 EIR), which included seven components (or primary projects and programs) that were considered adequate to solve more than 90% of the seawater intrusion and basin overdraft problems in the region. Additional projects were identified for potential future implementation should the selected portfolio not meet the planning-level expectations with respect to supply yield or demand offset using an adaptive management method of project implementation. One of these additional projects was the CDS Pipeline Expansion. The 2014 EIR found that the BMP Update would have less-than-significant impacts to biological resources with implementation of mitigation measures. PV Water has since included additional segments to the proposed CDS Pipeline Expansion that were not included in 1999 EIR or 2014 EIR, which are the subject of this BRSR.

1.3 Project Description

The purpose of PV Water's CDS is to convey supplemental irrigation supply to agricultural lands in the coastal area impacted by seawater intrusion. The Project is an integral component of the CDS and goals of PV Water's overall best management practice of stopping groundwater overdraft and halting seawater intrusion by increasing the use of delivered, supplemental irrigation water and decreasing coastal groundwater production. The existing CDS provides a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz Counties. The Project will allow approximately 1,300 additional acres of agricultural lands along the coast to be irrigated with supplemental irrigation supply water instead of groundwater, thereby reducing seawater intrusion in the Pajaro Valley's groundwater supply.

The proposed F, F1, F6, F7 and F8 pipelines are composed of approximately 3 miles of High Density Polyethylene (HDPE) distribution piping ranging from 10 to 30 inches in diameter and 15 agricultural turnouts designed to provide approximately 2,600 acre-feet per year of supplemental irrigation water to 1,300 irrigated acres in addition to the existing 5,100-acre service area (CDS). Construction of the project will result in the disturbance of approximately 27.4 acres, including temporary and permanent easements and staging areas.

Construction will be completed in a phased approach including vegetation clearing, soil excavation, pipe installation, and trench backfilling. The minimum depth of pipeline cover is anticipated to be approximately 5 feet for agricultural lands and approximately 4 feet for all other areas. The maximum depth of pipeline cover is not anticipated to exceed 10 feet. Trench excavations for the pipeline will be approximately 3 to 6.5 feet in width.

2 REGULATORY SETTING

2.1 Federal Policies and Regulations

2.1.1 *Clean Water Act of 1977*

2.1.1.1 SECTION 404

The purpose of the Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "waters of the U.S." without a permit from the U.S. Army Corps of Engineers (USACE). The term "waters of the U.S." as defined in Code of Federal Regulations (CFR) (33 CFR 328.3[a]; 40 CFR 230.3[s]) includes:

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands (wetlands are defined by the federal government [CFR Section 328.3(b), 1991] as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions);
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce;
4. All impoundments of waters otherwise defined as waters of the U.S. under the definition;
5. Tributaries of waters identified in paragraphs (1) through (4);
6. Territorial seas; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6).
8. Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the Environmental Protection Agency (U.S. Environmental Protection Agency [EPA]; 33 CFR 328.3[a][8] added 58 CFR 45035, August 25, 1993).

The EPA also has authority over wetlands and may override a USACE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the applicable Regional Water Quality Control Board (RWQCB).

2.1.1.2 SECTION 401

Section 401 of the CWA and its provisions ensure that federally permitted activities comply with the CWA and state water quality laws. Section 401 is implemented through a review process that is

conducted by the RWQCB (see Section 2.2.3, California State Water Resources Control Board and Regional Water Quality Control Boards, below.

2.1.2 *Endangered Species Act of 1973*

The Federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). Section 9 of the FESA prohibits the taking of endangered wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 United States Code [USC] 1538). Under Section 7 of the FESA, federal agencies are required to consult with USFWS if their actions, including permit approvals or funding, may adversely affect a federally listed species or its designated critical habitat. Through consultation and the issuance of a biological opinion, USFWS may issue an incidental take statement allowing take of the species that is incidental to otherwise authorized activity provided the action will not jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits to private parties in association with development of a Habitat Conservation Plan.

2.1.3 *Migratory Bird Treaty Act of 1918*

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, USFWS may issue permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13, General Permit Procedures, and 50 CFR Part 21, Migratory Bird Permits. Most nesting bird species are also protected by the California Department of Fish and Wildlife (CDFW) under California Fish and Game Code (CFGC) Sections 3503, 3503.5, 3505, 3513, 3800, and 3801.6. Additional protections are provided to state-listed species and fully protected species under the California Endangered Species Act (CESA) and CFGC Section 3511, respectively.

2.2 State Policies and Regulations

2.2.1 *California Endangered Species Act*

The CESA generally parallels the main provisions of the FESA, but unlike its federal counterpart, the CESA applies the take prohibitions to species proposed for listing (called "candidates" by the state). Section 2080 of the CFGC prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the CFGC as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful activities under Section 2081 of the CFGC. Project proponents wishing to obtain incidental take permits are able to do so through a permitting process outlined in California Code of Regulations (CCR) Section 783.

2.2.2 *California Fish and Game Code*

2.2.2.1 SECTIONS 3511, 4700, 5050 AND 5515: FULLY PROTECTED SPECIES

The State of California first began to designate species as "Fully Protected" before the creation of the FESA and CESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, mammals, amphibians, reptiles, and birds. Most fully protected species have since been listed as threatened or endangered under the FESA and/or CESA. The Fully Protected Species Statute (CFGC Section 4700) provides that fully protected species may not be taken or possessed at any time. Furthermore, CDFW may authorize take of fully protected species only in very limited circumstances, such as for necessary scientific research.

2.2.2.2 SECTION 1602: LAKE AND STREAMBED ALTERATION AGREEMENT

Section 1602 of the CFGC requires that a Lake and Streambed Alteration Application be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake." CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFW and the applicant is the Lake and Streambed Alteration Agreement.

2.2.3 *California State Water Resources Control Board and Regional Water Quality Control Boards*

The State of California regulates discharge of material into waters of the State pursuant to Section 401 of the CWA and the Porter-Cologne Act (California Water Code, Division 7, Section 13000 et seq.). The State Water Resources Control Board (SWRCB) and the local RWQCB are the relevant permitting agencies. Waters of the State are defined as any surface water or groundwater, including saline waters, which are within the boundaries of the state (California Codes: Public Resources Code [PRC] Section 71200). This differs from the CWA definition of waters of the U.S. by its inclusion of groundwater and waters outside the ordinary high water mark (OHWM) in its jurisdiction.

If impacted, waters of the State determined to be jurisdictional for these purposes may require waste discharge requirements (WDRs) and/or Section 401certification (in the case of any required USACE permits). Under the Porter-Cologne Act, a Report of Waste Discharge must be submitted prior to direct discharging waste into waters of the State, or proposing to discharge waste in any region that could affect the quality of the waters of the State (California Water Code Section 13260). WDRs or a waiver of WDRs would then be issued by the RWQCB.

2.2.4 *California Coastal Act of 1976*

The California Coastal Act (CCA) governs the decisions made by the California Coastal Commission (CCC) regarding issues such as shoreline public access and recreation, terrestrial and marine habitat protection, water quality, commercial fisheries, and development within the California coastal zone. Development within the coastal zone would require a Coastal Development Permit from the CCC or from a local government with a CCC-certified local coastal program (LCP). Pursuant to PRC Section 30106 development in this context means:

> on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including, but not limited to, subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; construction, reconstruction, demolition, or alteration of the size of any structure, including any facility of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973 (commencing with Section 4511).

Whereas "structure" includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line.

The CCC also regulates activities in wetlands and other environmentally sensitive habitat areas (ESHAs). Unlike the federal government, the CDFW and CCC have adopted the Cowardin et al. (1979) definition of wetlands:

> Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface of the land or is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (at least 50 percent of the aerial vegetative cover); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.

The Project is located within the coastal zone within an unincorporated portion of Santa Cruz County. The Santa Cruz County LCP was adopted September 28, 1982, and certified by the CCC on April 14, 1983. The LCP is administered pursuant to County of Santa Cruz (County) Ordinance Title 13, Chapter 13.03 and the implementing regulations in Chapter 13.20. The Santa Cruz County LCP does not define wetlands and thus defers to the same definition of wetlands as the CCC. The County provides the following definition for ESHA:

> An area is defined as a "sensitive habitat" if it meets one or more of the following criteria:
>
> (1) Areas of special biological significance as identified by the State Water Resources Control Board.
>
> (2) Areas which provide habitat for locally unique biotic species/communities including but not limited to: oak woodlands, coastal scrub, maritime chaparral, native rhododendrons and associated Elkgrass, indigenous Ponderosa Pine, indigenous Monterey Pine, mapped grassland in the Coastal Zone and sand parkland; and special forests including San Andreas Oak Woodlands, indigenous Ponderosa Pine, indigenous Monterey Pine and ancient forests.
>
> (3) Areas adjacent to essential habitats of rare, endangered or threatened species as defined in subsections (5) and (6) of this definition.

(4) Areas which provide habitat for species of special concern as listed by the California Department of Fish and Game in the special animals list, natural diversity database.

(5) Areas which provide habitat for rare or endangered species which meet the definition of Section 15380 of the California Environmental Quality Act guidelines.

(6) Areas which provide habitat for rare, endangered or threatened species as designated by the State Fish and Game Commission, United States Fish and Wildlife Service or California Native Plant Society.

(7) Nearshore reefs, rocky intertidal areas, seacaves, islets, offshore rocks, kelp beds, marine mammal hauling grounds, sandy beaches, shorebird roosting, resting and nesting areas, cliff nesting areas and marine, wildlife or educational/research reserves.

(8) Dune plant habitats.

(9) All lakes, wetlands, estuaries, lagoons, streams and rivers.

(10) Riparian corridors.

Policies of the Santa Cruz County LCP take precedence over the County of Santa Cruz General Plan policies for property located in the Coastal Zone. Actions taken by counties or municipalities within the coastal zone may be appealed to the CCC only under defined circumstances (specified in PRC Section 30603). The CCC also retains permit authority in certain limited areas, such as tidelands and submerged lands (CCA Section 30519(b)).

3 METHODOLOGY

The following section details the methods employed when reviewing biological resources in proximity to the Project.

3.1 Biological Study Area

This report contains review of a BSA that includes the maximum anticipated extent of Project-related impacts within the Project area and an additional survey buffer of 250 feet beyond the Project area (see Figure 2). SWCA conducted a literature review of existing sources of information regarding occurrences of special-status species and sensitive resources within and near the BSA. Field surveys were conducted to document sensitive biological resources within the BSA, including potentially jurisdictional water features and ESHAs.

3.2 Literature Review

SWCA conducted an extensive literature review to gain familiarity with the Project area and to identify potential sensitive biological features including ESHAs and target plant and wildlife species that have the potential to occur within the Project vicinity. The review was initiated with a query of the most recent version of the CDFW California Natural Diversity Database (CNDDB 2019) to identify reported occurrences of sensitive species within 5 miles of the proposed Project area (Appendix A: Figures A-1 and A-2). In addition to the CNDDB query, USFWS species lists and the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants of California (CNPS 2019) for the

Watsonville West, Watsonville East, Prunedale, Moss Landing, Soquel, Laurel, Loma Prieta, and Mount Madonna USGS 7.5 minute topographic quadrangles were reviewed to provide information on rare plants and wildlife that are known to occur in the area (Appendix B). To identify critical habitat for terrestrial and aquatic species in the Project vicinity, the USFWS Critical Habitat Mapper was queried (Appendix A: Figure A-3). The USFWS National Wetlands Inventory (NWI) Wetlands Mapper (USFWS 2019) and USGS National Hydrography Data (NHD) (USGS 2018) were also used to identify potential hydrological features in the Project area (Appendix A: Figure A-4). Existing environmental documents and reports were also reviewed for background information and recent findings in the vicinity, as described in Section 1.2, Project Background, above.

All of the listed species and habitats found in the literature review were compiled into a table for use during the field survey as described in Section 3.3, Field Surveys, below. Appendix C provides a description of the 83 special-status plant and wildlife species and three natural communities reviewed, and a rationale for expecting their presence or absence within the BSA. For the purpose of this report, special-status species are defined as follows:

- Plants and animals listed, proposed, or candidates for listing as threatened or endangered (including delisted species) under FESA.
- Plants and animals listed or proposed for listing by the State of California as threatened or endangered under CESA.
- Plants listed as rare under the California Native Plant Protection Act.
- Plants included in CNPS Ranks 1, 2, and 3.
- California designated status:
    - Animal species that are fully protected in California; or
    - Species of Special Concern (SSC) to the CDFW.

3.3 Field Surveys

3.3.1 *Reconnaissance Survey*

On July 10, 2019, SWCA biologists conducted a reconnaissance-level survey of the BSA. The survey included walking transects spaced to provide full coverage of the BSA. The purpose of the field survey was to identify sensitive biological resources that could be affected by the Project. When necessary, the surveyors referred to *The Jepson Manual* (Baldwin et al. 2012) to identify plant species. In addition, the surveyors identified and mapped habitat types using *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). No formal delineation of waters of the U.S. and/or State was intended or undertaken as part of this study.

4 RESULTS

The following section details the results of the desktop review, literature searches, and field surveys. Figure 3 shows habitat types and sensitive biological resources that were mapped within the BSA. Representative photographs depicting existing conditions are included in Appendix D. All vertebrate species observed or detected by sign during the survey were recorded and are included in Appendix E.

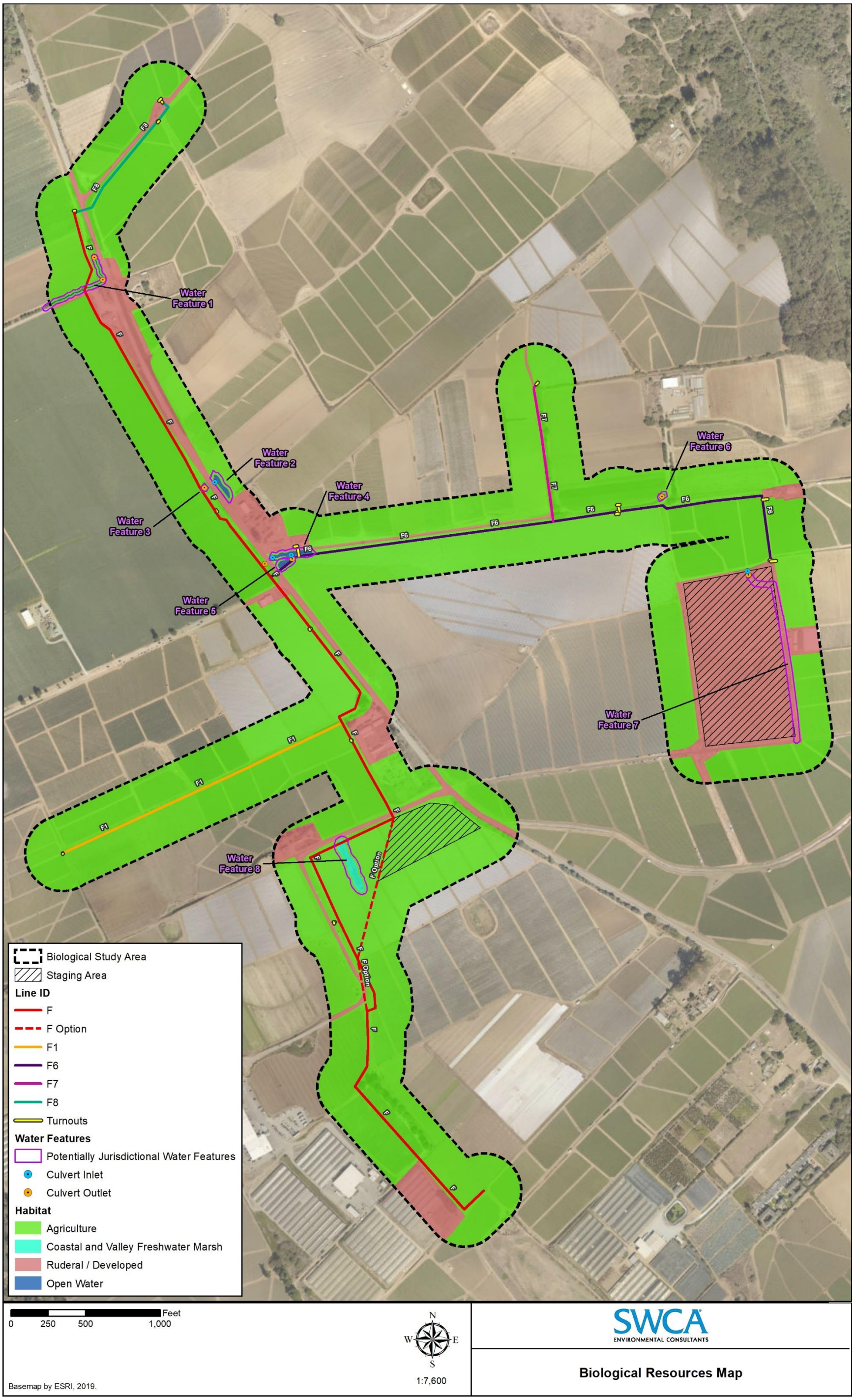

Figure 3. Biological resources map.

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4.1 Climate, Topography, Elevation, and Soils

The Pajaro Valley is in a Mediterranean climate typical of central coastal California. This climate zone is characterized by cool, wet winters and warm, dry summers. Over 90% of the yearly precipitation falls from November through April, and coastal fog is common in the summer and fall months. The mean annual temperature is 57 degrees Fahrenheit (°F), the mean monthly maximum temperature is 74°F in September, and the mean monthly minimum temperature is 39°F in January. The long-term mean annual rainfall at Watsonville is 22.2 inches, averaged for the period of record from water years 1880 to 2012 while the 30-year normal (1981 to 2010) is 23.5 inches (PV Water 2013).

The BSA is predominately flat at an elevation of approximately 100 to 275 feet above mean sea level, with some small hills.

SWCA biologists queried the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey to determine the soil types that occur within the Project (NRCS 2019). Two soil map units, Baywood loamy sand and Elder sandy loam, are located within the BSA and described as follows:

- The Baywood loamy sand component comes from Eolian deposits. This somewhat excessively drained soil does not meet hydric criteria and typically has no zone of water saturation within a depth of 80 inches.
- The Elder sandy loam component comes from Alluvium. This well-drained soil does not meet hydric criteria and typically has no zone of water saturation within a depth of 80 inches.

4.2 Habitat Types

The BSA is primarily dominated by disturbed land uses including agricultural and ruderal/developed lands. In addition, there are small, interspersed areas of open water and coastal and valley freshwater marsh habitat, which are largely associated with adjacent agricultural operations. Coastal and valley freshwater marsh is considered a sensitive natural community of concern by CDFW. Habitat types are depicted in Appendix A as well as in Figure 3. The following sections provide additional detail regarding each of the habitat types observed in the BSA.

4.2.1 *Agriculture*

Agricultural lands are subject to periodic disking, planting, harvesting, and the application of herbicides, pesticides, and fertilizers, which prevent the establishment of natural plant species and communities. A number of weedy plant species are associated with cultivated lands; many of these are nonnative species that are adapted to open, bare ground, rapid maturity, and high seed production.

Agricultural land makes up the majority of the BSA. At the time of the surveys, these areas were in active cultivation of strawberries, Brussel sprouts, and some areas were tilled or fallow. Ruderal vegetation was observed growing along the perimeters of agricultural fields, including bristly ox-tongue (*Helminthotheca echioides*), sweet clover (*Melilotus* sp.), storksbill (*Erodium botrys*), wild radish (*Raphanus raphanistrum*), and sow thistle (*Sonchus oleraceus*), as well as several nonnative grasses. Agricultural areas observed in the BSA provide limited habitat for special-status plants and wildlife primarily due to the routine disturbance and land use practices in these areas.

4.2.2 *Ruderal and Developed*

Ruderal/developed habitat includes areas that are disturbed by past land use practices, development, and/or ground disturbance. Plant species in these areas often include nonnative weeds or ornamental landscaping.

Ruderal and developed areas within the BSA include gravel and paved roadways, residential developments, and equipment pads for existing utility infrastructure. Vegetation observed in these areas generally included the same species described within agricultural areas, as well as ornamental trees, shrubs, grasses, and forbs used in landscaping. Ruderal and developed areas typically provide low habitat value for special-status plant and wildlife species. However, trees and infrastructure may provide suitable foraging and nesting habitat for avian species.

4.2.3 *Coastal and Valley Freshwater Marsh*

Coastal and valley freshwater marsh is generally dominated by perennial, emergent monocots such as cattail (*Typha* sp.) and bulrush (*Scirpus* sp.) growing in closed canopies. These areas are subject to permanent freshwater flooding or prolonged saturation, which leads to an accumulation of deep, peaty soils. This vegetation community typically occurs along the upper portion of the Sacramento-San Joaquin River Delta as well as along the coast and in coastal valleys near river mouths, lakes, and springs (Holland 1986).

Coastal and valley freshwater marsh habitat observed within the BSA is limited to the southern portion of the Project along the F line (refer to Figure 3). This feature is fed by irrigation runoff from adjacent agricultural fields and a roadside drainage ditch. The feature was ponded at the time of the survey and included bulrush, cattail, dotted smartweed (*Persicaria punctate*), arroyo willow (*Salix lasiolepis*), and duckweed (*Lemna minor*). These perennial plants have been well established and create habitat for various avian and amphibian species, including suitable breeding habitat for California red-legged frog (*Rana draytonii*). Several bullfrogs (*Lithobates catesbeianus*) were heard and seen within the marsh during the June 2019 survey.

4.2.4 *Open Water*

Open water habitats include areas of standing or flowing water that typically lack emergent vegetation or a canopy cover, including ponds and the ocean. Three manmade open water areas were observed in the BSA, all of which appeared to be designed to collect irrigation runoff from adjacent agricultural fields. Each of these areas lacked aquatic vegetation and contained murky water of an unknown depth at the time of the June 2019 survey. These features likely contain high levels of pesticides, herbicides, and fertilizers making them unsuitable for special-status species.

4.3 Jurisdictional Wetlands and Waters

Seven potentially jurisdictional drainage features were mapped within the BSA (see Figure 3; Table 1). One ephemeral drainage feature (Water Feature 1) that contained bed, banks, and marginally defined OHWMs bisects the northern portion of the F line. This feature is fed by irrigation runoff from adjacent agricultural fields and drains generally west into the Pacific Ocean. This feature may be considered jurisdictional by the USACE, CDFW, RWQCB, and CCC. Five additional isolated wetland features and ponded areas (Water Features 2 through 6) were also observed throughout the BSA. These features lacked defined bed and banks and lacked connectivity to traditionally navigable waters or relatively permanent waters, therefore likely wouldn't be considered jurisdictional by USACE or CDFW. However, based on

the presence of hydrophytic vegetation and/or wetland hydrology, these features may be considered jurisdictional under the RWQCB and/or CCC. Two additional isolated drainage features—the linear drainage ditches near the easternmost proposed staging area and the coastal and valley freshwater marsh—contained defined bed and banks and evidence of hydrophytic vegetation and/or wetland hydrology (Water Features 7 through 8). Therefore, these two features may be considered jurisdictional under the RWQCB, CDFW, and CCC.

The table provided below summarizes potentially jurisdictional drainage features within the BSA. Refer to Appendix A for the location of mapped wetlands and other waters in the BSA. A formal jurisdictional delineation report has not been prepared at this time for this project.

Table 1. Potentially Jurisdictional Wetlands and Other Waters Mapped Within the BSA

Feature ID	Feature Type	USACE	RWQCB	CDFW	CCC
1	Ephemeral drainage feature	X	X	X	X
2	Open water/pond		X		X
3	Seasonal wetland		X		X
4	Open water/pond		X		X
5	Open water/pond		X		X
6	Seasonal wetland		X		X
7	Ephemeral drainage feature		X	X	X
8	Coastal and valley freshwater marsh		X	X	X

Note: A formal jurisdictional delineation report has not been prepared. The table above consists of a preliminary assessment and has not been verified by the regulatory agencies.

4.4 Special-Status Species with Potential to Occur

Based on the existing biological conditions in and adjacent to the BSA, a review of relevant literature, the known occurrences of special-status species in the region (see Appendix C), and SWCA biologists' local knowledge of the region, three special-status plants and five special-status wildlife species were determined to have potential to occur in the BSA. Summary descriptions are provided below for special-status species that have potential to occur in the BSA. Descriptions of other plants and wildlife species that were evaluated for potential occurrence are provided in Appendix C.

4.4.1 *Special-Status Plants*

Three special-status plants were determined to have potential to occur within the BSA: bristly sedge (*Carex comosa*; CNPS 2B.1), deceiving sedge (*Carex salinformis*; CNPS 1B.2), and Pacific Grove clover (*Trifolium polyodont*; state rare, CNPS 1B.1); each of these species are associated with freshwater marsh and wetlands areas. While no CNDDB occurrences have been recorded within 5 miles of the BSA for any of the above-mentioned species, the coastal and valley freshwater marsh observed in the BSA may provide suitable habitat for these species. The June 2019 survey was conducted within the appropriate bloom period for each of these species; however, no individuals were observed within the BSA.

No other special-status plant species identified during desktop review were observed during the field survey. The remaining 47 special-status plant species that were identified during desktop review were determined to have no potential to occur in the BSA due to lack of suitable habitat, soils, or elevation requirements (see Appendix C).

4.4.2 *Special-Status Wildlife Species*

Five special-status wildlife species were determined to have low potential or potential to occur in the BSA: California red-legged frog (*Rana draytonii;* federally threatened, CDFW SSC), Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum;* federally and state endangered, CDFW fully protected), white-tailed kite (*Elanus leucurus;* CDFW fully protected), pallid bat (*Antrozous pallidus;* CDFW SSC), and Townsend's big-eared bat (*Corynorhinus townsendii;* CDFW SSC). The following sections provide additional detail regarding these species and their habitat within the BSA.

4.4.2.1 CALIFORNIA RED-LEGGED FROG

California red-legged frog occurs in various habitats during its life cycle. Breeding areas include aquatic habitats such as lagoons, streams, natural and human-made ponds, and slow-flowing stream reaches or deep pools within a stream with vegetation or other material to which egg masses may be attached (USFWS 2010). This species prefers aquatic habitats with little or no flow, the presence of surface water until at least early June, surface water depths to at least 2.3 feet, and the presence of emergent vegetation (e.g., cattails and bulrush). During periods of wet weather, some individuals may make overland dispersals through adjacent upland habitats of distances up to 2 miles (USFWS 2010). Upland habitats including small mammal burrows and woody debris can also be used as refuge during the summer if water is scarce or unavailable (Jennings and Hayes 1994).

Federally designated California red-legged frog critical habitat is located approximately about 0.14 mile east of the BSA. California red-legged frog are known to occur within Harkins and Gallighan Sloughs which are in the vicinity of the BSA. Thirteen CNDDB occurrences have been recorded within 5 miles of the Project, with the nearest occurrence recorded approximately 0.8 mile to the southeast of the BSA, where two adults were observed in Harkins Slough in 2017. The coastal and valley freshwater marsh observed in the BSA may provide suitable aquatic breeding habitat for this species; however, the habitat is considered to be marginal due to the presence of predators (i.e., bullfrogs) and the disturbed fragmented landscape immediately surrounding the marsh. While the majority of the BSA is subject to routine disturbance and low-quality habitat for red-legged frogs, roadside drainage ditches and adjacent agricultural lands may provide migration corridors for frogs traveling to/from breeding sites. Given documented occurrences in the region and suitable breeding habitat within the vicinity of the project, there is potential for California red-legged frog to occur within the BSA.

4.4.2.2 SANTA CRUZ LONG-TOED SALAMANDER

Santa Cruz long-toed salamanders are endemic to California. This species is known to occur in a very limited range with 11 known scattered populations within southern Santa Cruz and northern Monterey Counties (CDFW [n.d.]). During winter months, this species can be found in taking refuge under wood, logs, rocks, or bark near breeding sites (e.g., ponds). The remainder of the year, they typically live underground in small mammal burrows in coastal woodlands, upland chaparral, and riparian areas (California Herps 2019).

The nearest CNDDB occurrence was recorded 0.27 mile north of the Project in 2017, where six adults were observed at Ellicott Pond. There were 42 individuals documented at this location 2014 and 30 in 2016. Due to the lack of sufficient dense vegetation, routine disturbance (e.g., tilling of ag fields), and fragmented landscape between Ellicott Pond and the BSA, it is unlikely that Santa Cruz long-toed salamanders would migrate into the BSA. The coastal and freshwater valley marsh in the BSA may provide marginal breeding habitat; however, this feature contains predators (i.e., bullfrogs) and is surrounded by a heavily modified/disturbed landscape. This species was not observed during the July 2019 survey and is not expected to occur during Project activities.

4.4.2.3 WHITE-TAILED KITE

White-tailed kite, a CDFW fully protected species, are known to occur in open woodlands, grasslands, marshes, and farmland. White-tailed kites build large platform nests on the tops of trees and man-made structures usually 20 to 50 feet tall, generally located near to open ground with abundant rodent populations (Audubon Society 2019). Harvest mice and voles active during the day are the primary prey of kites. Nest building typically begins in January and brooding continues into the spring, lasting around 30 days with juveniles fledging another 30 days later (Audubon Society 2019). The pair may brood a second time in a breeding season. White-tailed kites are not known to migrate seasonally and can be found on the Central Coast year-round.

No white-tailed kite CNDDB occurrences have been recorded within 5 miles of the Project. Trees observed throughout the BSA may provide suitable nesting habitat for this species while adjacent agricultural fields may provide suitable foraging habitat. Therefore, this species was determined to have potential to occur in the BSA.

4.4.2.4 PALLID BAT

Pallid bat, a CDFW SSC, is a yearlong common species found in low elevations in California, and occurs in a wide variety of habitats, including grasslands, shrublands, woodlands, and forests (Pierson 1998). It prefers dry habitats with rocky areas for roosting with access to open areas for foraging. Day roosts are in caves, crevices, and mines, and occasionally in hollow trees and buildings, and night roosts may occur in open sites, such as porches and open buildings. Maternity colonies form in early April, as young are born from April to July, but mostly from May to June. While pallid bats are social roosting in large groups even with other bat species, they are very sensitive to disturbance of roosting sites (CDFW 2016).

No CNDDB occurrences have been documented within 5 miles of the Project. Although no large crevices suitable for large maternity colonies were observed in the BSA, buildings and trees observed throughout the BSA may provide suitable habitat for individuals or small groups of maternity roosting pallid bats. Adjacent agricultural fields may provide foraging opportunities for this species. It was therefore determined that this species has potential to occur in the BSA.

4.4.2.5 TOWNSEND'S BIG-EARED BAT

Townsend's big-eared bat, a CDFW SSC, occur in a variety of habitats including forests, deserts, prairies, riparian areas, active agricultural land, and coastal bluffs. They utilize open roosting areas such as large caves, old mines, bridges, buildings, and cavity-forming rock formations for maternity roosts. Trees are also used for individual day and night roosts. Townsend's big-eared bats are easily disturbed and may abandon a roost if disturbed for extended periods or frequently (NPS 2018)

No CNDDB occurrences have been recorded within 5 miles of the Project. As a species that prefers open roosting habitat, Townsend's big-eared bat may select large trees or buildings within the BSA as roost sites. Agricultural fields in the BSA may also provide foraging opportunities for this species. It was therefore determined that Townsend's big-eared bat has potential to occur in the BSA.

4.4.3 *Nesting Migratory Passerine Birds and Raptors*

Most nesting bird species are protected under the MBTA as well as CFGC Sections 3503, 3503.5, 3505, 3513, 3800, and 3801.6. Additional protections are provided to state listed species and fully protected species under CESA and CFGC Section 3511, respectively. The migratory bird nesting season is generally identified as February 1 through August 31, but varies by species. These regulations prohibit the

removal of active nests and provide nests with protection from "take" typically in the form of activity-free buffers around active nests or other performance controls. There are further provisions that prohibit the removal of inactive nests used by raptors and listed species.

During the June 2019 field survey, a variety of avian species and activity were observed. While no active nests were observed, a variety of nesting substrate, including trees, shrubs, and coastal and valley freshwater marsh, were observed throughout the BSA. While ongoing agricultural operations and adjacent roadways may discourage avian nesting due to routine disturbance, there remains a potential for avian species to nest and forage within the BSA. A list of all vertebrate species including avian species observed during the survey is included in Appendix E.

4.4.4 *Environmentally Sensitive Habitat Areas*

Potentially jurisdictional wetlands and other waters summarized in Section 4.3 are considered ESHAs per the Santa Cruz County LCP definition. The Santa Cruz County LCP does not define wetlands and thus defers to the same single-parameter definition of wetlands as defined by the CCC. Activities in these areas are regulated by the County under the CCC-certified LCP.

5 AVOIDANCE AND MINIMIZATION MEASURES

The following AMMs are recommended to reduce potential impacts to sensitive biological resources:

1. **Preconstruction Worker Environmental Awareness Training.** Prior to any Project construction activities, environmental awareness training will be conducted for on-site construction personnel. The training will explain measures to prevent impacts on nesting birds and special-status species with potential to occur in the Project area. The training will also include a description of these special-status species and their habitat needs, and an explanation of the status of these species and their protection under the FESA, CESA, MBTA, and other statutes. A brochure will be provided with color photos of sensitive species as well as a discussion of Project measures.
2. **Preconstruction California Red-Legged Frog and Santa Cruz Long-Toed Salamander Surveys.** A preconstruction survey for California red-legged frog and Santa Cruz long-toed salamander shall be conducted within the construction zone immediately prior to ground disturbance. If no individuals of these species are detected during these surveys, then construction-related activities may proceed. If California red-legged frogs and/or Santa Cruz long-toed salamanders are found within the work area, construction activities will be halted and will not resume until the individuals have moved off the construction site on their own volition.
3. **Preconstruction Nesting Bird Surveys.** During the breeding bird season (February 1 through August 31), a qualified biologist will survey the Project area and surrounding 500-foot buffer for nesting raptors and 250-foot buffer for all other avian species. The survey will be conducted no more than 14 days prior to any ground-disturbing activity or vegetation removal. If active nests are observed (containing eggs or chicks), avoidance procedures will be adopted by an avian biologist, on a case-by-case basis. These may include implementation of buffer areas (minimum 50-foot buffer for passerines and 250-foot minimum buffer for raptors) or seasonal avoidance.
4. **Preconstruction Maternity Roost Bat Surveys.** During the breeding season of native bat species in California (April 1 through August 31), a qualified biologist will conduct a focused survey to determine if active maternity roosts of special-status bats are present within 250 feet of

the Project area. Should an active maternity roost of a special-status bat species be identified, the roost shall not be disturbed until the roost is vacated, as determined by the biologist.

5. **Implement Standard Protective Measures to Maintain Water Quality and Control Erosion and Sedimentation.** Standard measures to maintain water quality and to control erosion and sedimentation shall be implemented. These measures include developing a Stormwater Pollution Prevention Plan, storing equipment and materials outside water features, and maintaining vehicles and equipment to avoid spills.

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APPENDIX A

Critical Habitat, CNDDB, and NWI/NHD Figures

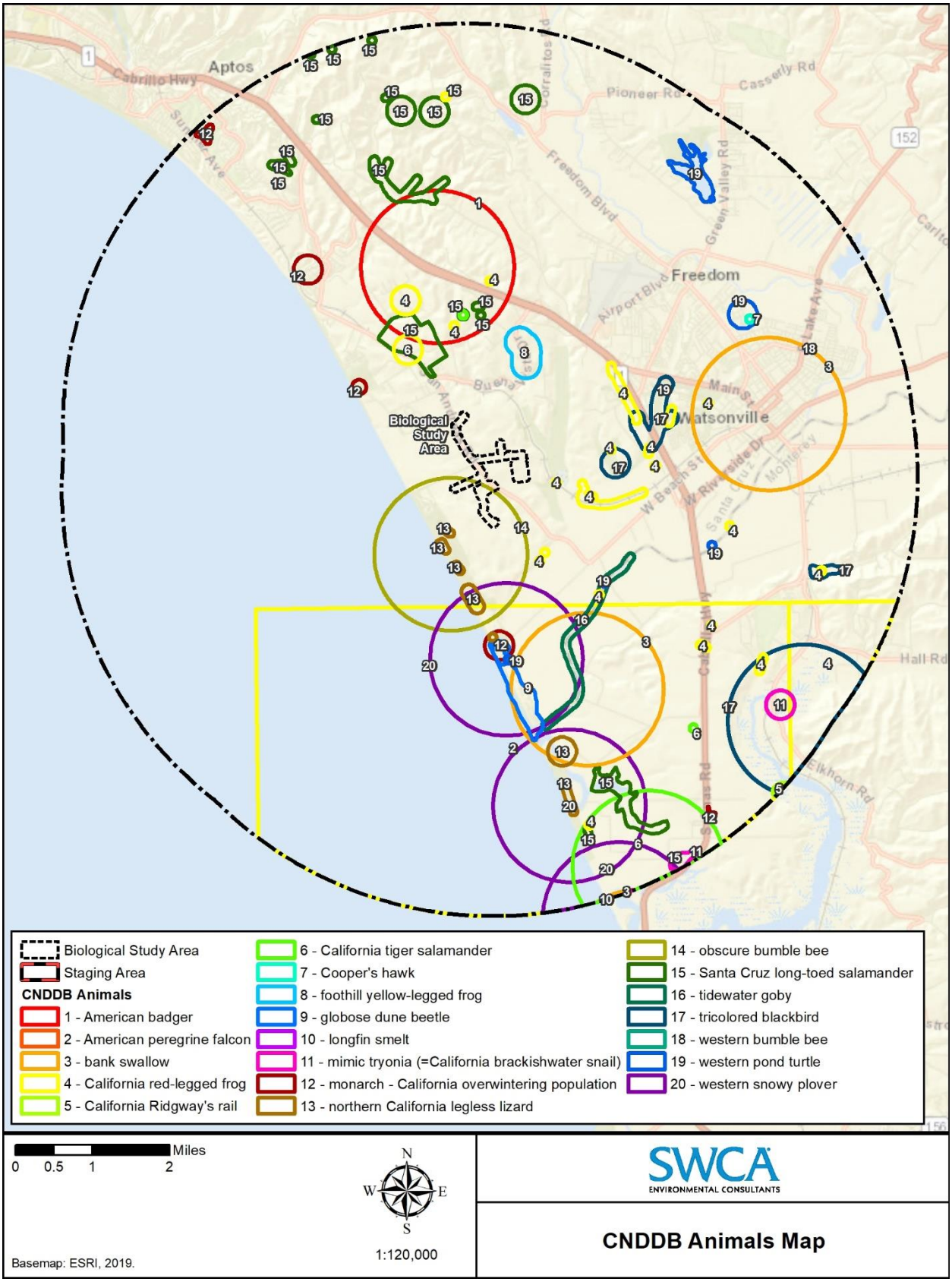

Figure A-1. CNDDB 5-mile animals occurrence map.

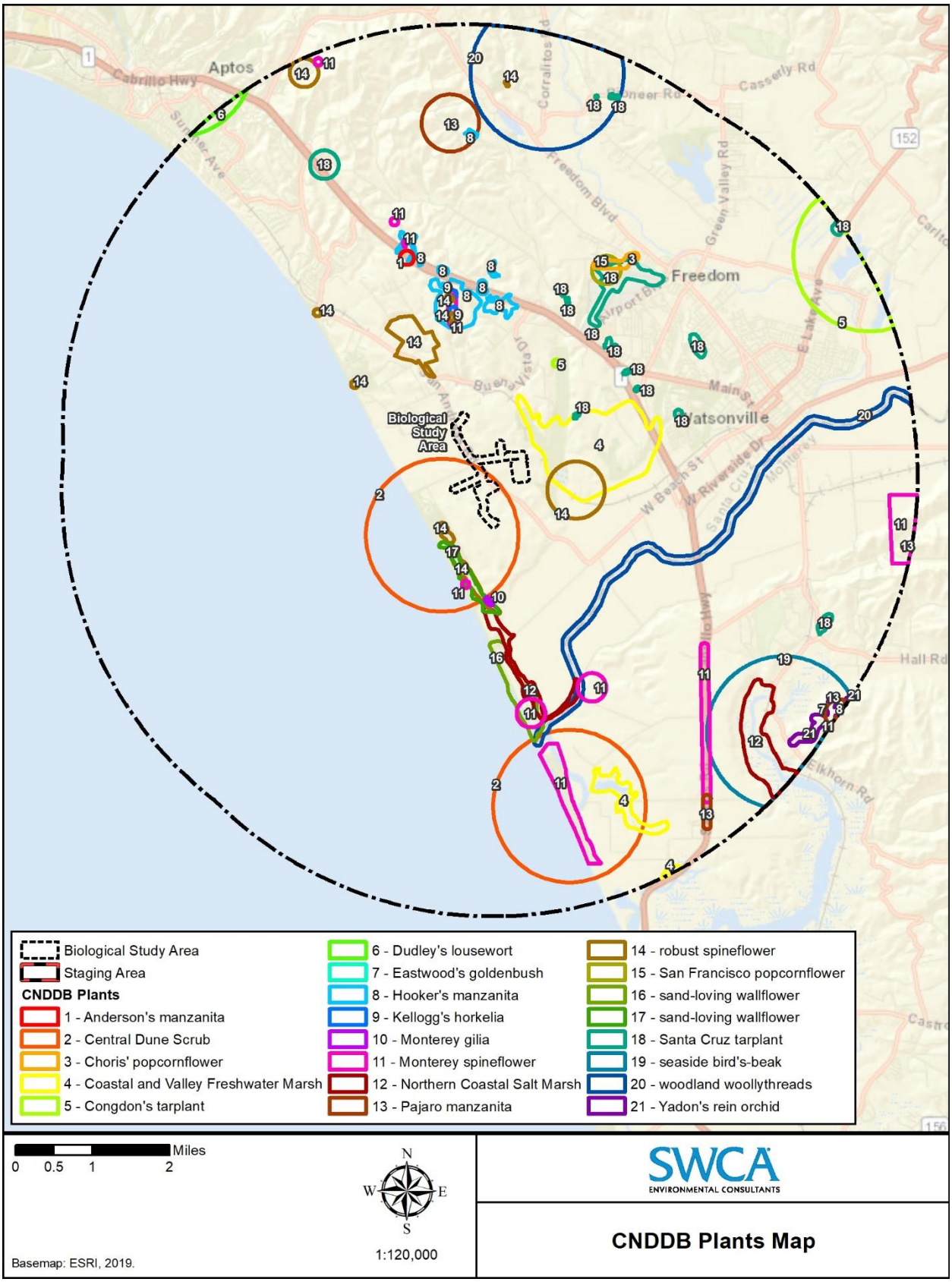

Figure A-2. CNDDB 5-mile plants occurrence map.

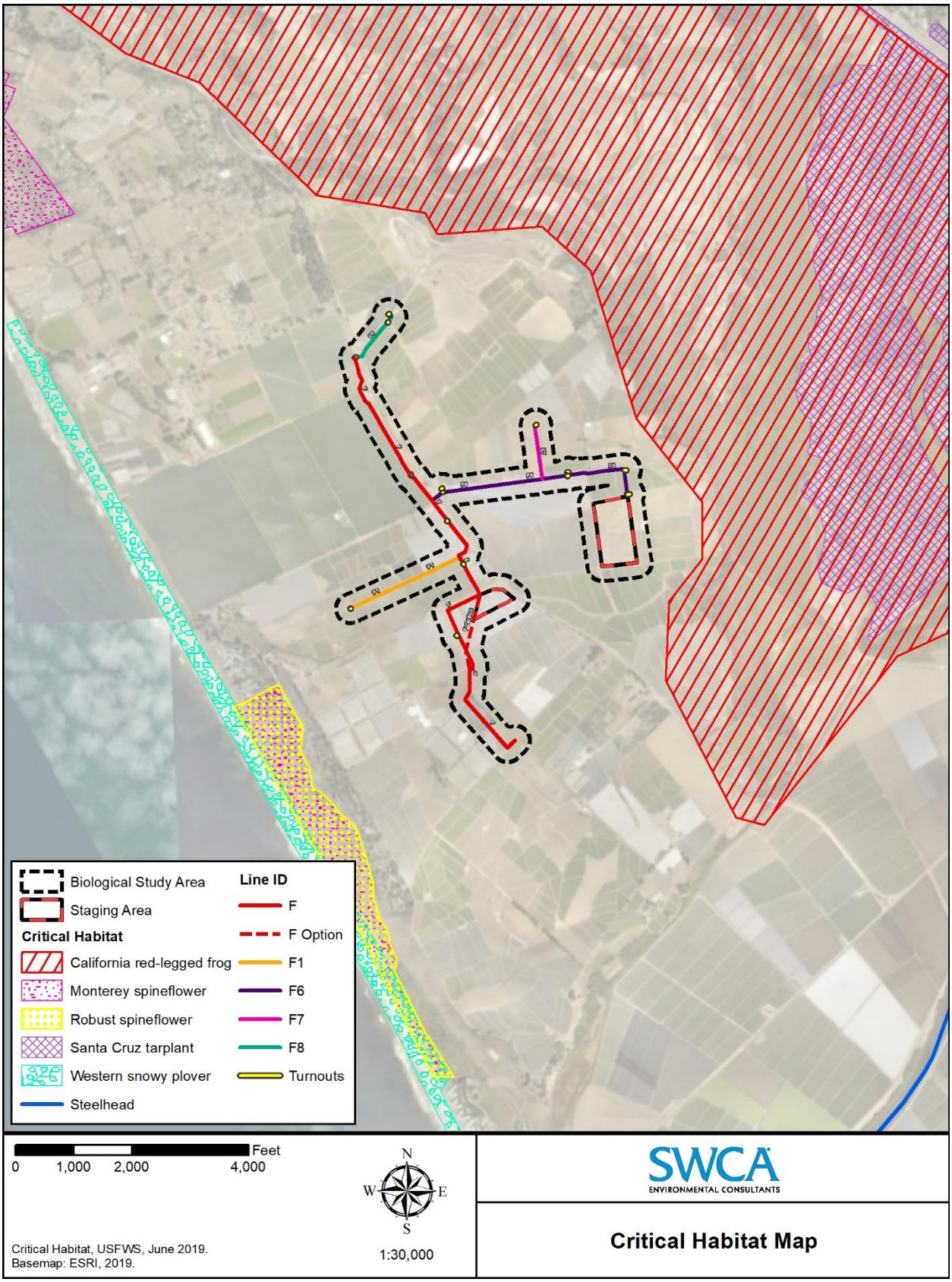

Figure A-3. Critical habitat map.

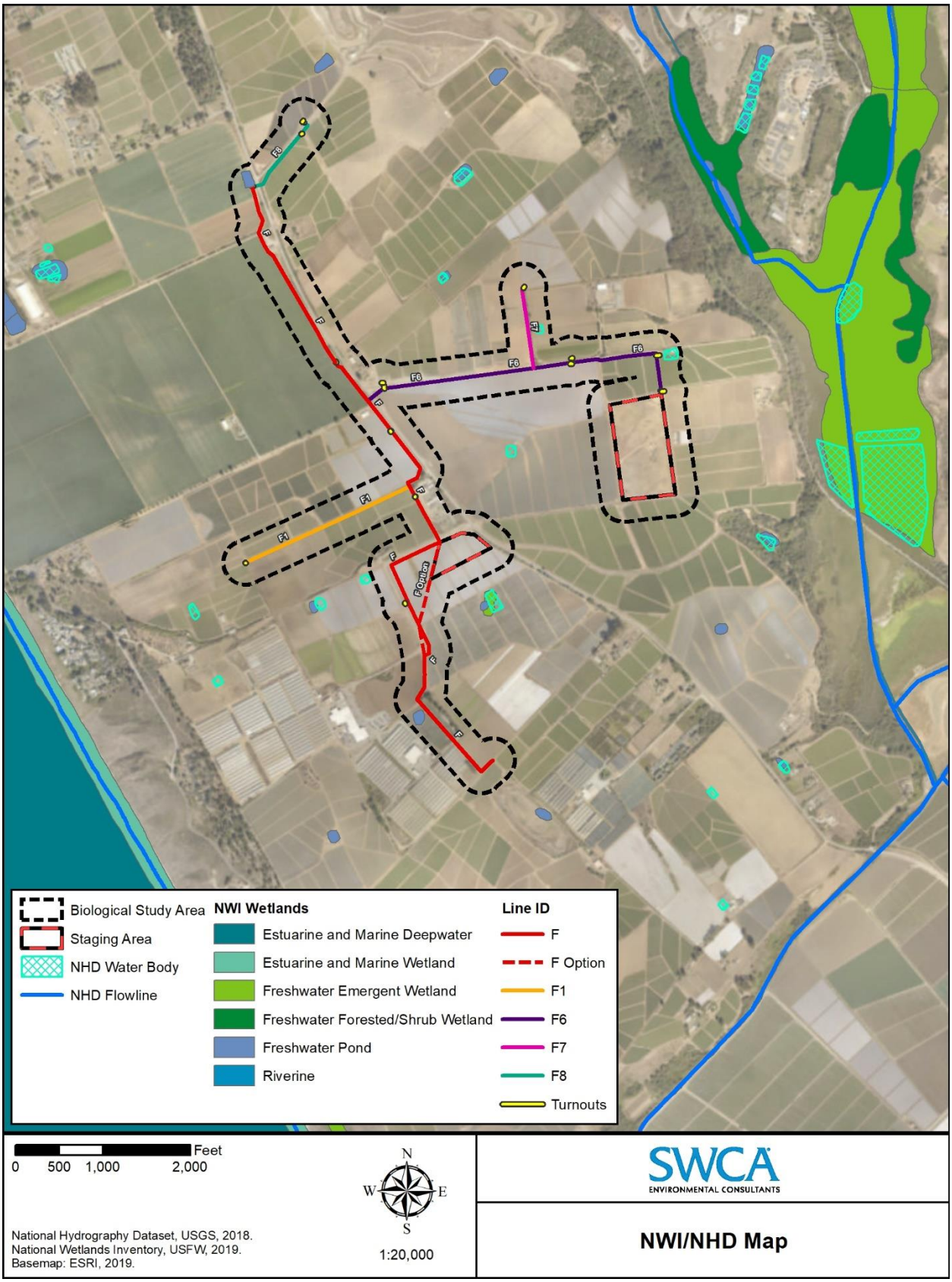

Figure A-4. NWI/NHD map.

APPENDIX B

Special-Status Species Records

APPENDIX C

Special-Status Species and Natural Communities Investigated for Potential Occurrence

Table C-1. Special-Status Plant Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
bent-flowered fiddleneck *Amsinckia lunaris*	Annual herb that occurs in coastal bluff scrub, cismontane woodland, and valley and foothill grassland. 3–500 meters.	May–June	--/--/1B.2	**No potential to occur.** No suitable habitat is present within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted within the appropriate bloom period.
Anderson's manzanita *Arctostaphylos andersonii*	Perennial evergreen shrub that occurs in openings and edges among broad-leafed upland forest, chaparral, and north coast coniferous forest. 60–760 meters.	November–May	--/--/1B.2	**No potential to occur.** No suitable habitat is present within the BSA. One CNDDB occurrence was recorded 2.3 miles north of the Project in 1991. No *Arctostaphylos* species were observed within the BSA.
Hooker's manzanita *Arctostaphylos hookeri var. hookeri*	Perennial evergreen shrub that occurs on sandy soils, shaley soils, and sandstone outcrops. Associated with closed cone coniferous forest, chaparral, and coastal scrub. 85–536 meters.	January–June	--/--/1B.2	**No potential to occur.** No suitable habitat is present within the BSA. One CNDDB occurrence was recorded 1.8 miles north of the Project in 2016. Species not observed within the BSA.
Pajaro manzanita *Arctostaphylos pajaroensis*	Perennial evergreen shrub that occurs in chaparral on sandy soils. 30–760 meters.	December–March	--/--/1B.1	**No potential to occur.** No suitable habitat is present within the BSA. One CNDDB occurrence was recorded 1.7 miles from the Project in 2016. Species not observed within the BSA.
Kings Mountain manzanita *Arctostaphylos regismontana*	Perennial evergreen shrub found in broad-leafed upland forest, chaparral, and north coast coniferous forest with granitic or sandstone based soil. 305–730 meters.	January–April	--/--/1B.2	**No potential to occur.** No suitable habitat is present and the BSA is located outside of the species' elevation range. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed within the BSA.
Bonny Doon manzanita *Arctostaphylos silvicola*	Perennial evergreen shrub endemic to the inland sandhills of the southern Santa Cruz Mountains; chaparral, lower montane coniferous forest. 120–600 meters.	January–March	--/--/1B.2	**No potential to occur.** No suitable habitat is present and the BSA is located outside of the species' elevation range. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed within the BSA.
marsh sandwort *Arenaria paludicola*	Perennial herb found in marshes and swamps. Grows through dense mats of *Typha*, *Juncus*, *Scirpus*, etc. in freshwater marsh. The only known populations in California occur at Oso Flaco Lake and the southern edge of Morro Bay. 10–170 meters.	May–August	FE/SE/1B.1	**No potential to occur.** The BSA is located outside of the current range for this species. No CNDDB occurrences have been recorded within 5 miles of Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Hoover's calcyadenia *Calcyadenia hooveri*	Annual herb that occurs in cismontane woodland, and valley and foothill grassland. 65–300 meters.	July–September	--/--/1B.3	**No potential to occur.** No suitable woodland or grassland habitat is present within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in BSA during surveys conducted outside the appropriate bloom period.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
Santa Cruz Mountain pussypaws *Calyptridium parryi* var. *hesseae*	Annual herb that occupies sandy or gravelly, openings in chaparral and cismontane woodland. 305–1530 meters.	May–August	--/--/1B.1	**No potential to occur.** No suitable chaparral or woodland habitat is present and the BSA is located outside of the species' elevation range. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
bristly sedge *Carex comosa*	Perennial herb found in coastal prairie, marshes and swamps, valley and foothill grassland. 0–625 meters.	May–September	--/--/2B.1	**Potential to occur.** The coastal and valley freshwater marsh may provide suitable habitat for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
deceiving sedge *Carex saliniformis*	Perennial grass-like herb that occurs in coastal prairie, coastal scrub, meadows and sweeps, marshes and seeps/mesic. 3–230 meters.	June	--/--/1B.2	**Potential to occur.** The coastal and valley freshwater marsh may provide suitable habitat for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
coyote ceanothus *Ceanothus ferrisiae*	Perennial evergreen shrub that occurs in serpentine soils of chaparral, coastal scrub, and valley and foothill grassland. 120–460 meters.	January–May	FE/--/1B.1	**No potential to occur.** The BSA lacks serpentine soils typically associated with this species and is located outside of the known elevation range for this species. No occurrences within 5 miles of the Project. Species not observed in BSA during surveys conducted outside the appropriate bloom period.
Congdon's tarplant *Centromadia parryi* var. *congdonii*	Annual herb found in depressional areas within valley and foothill grassland. 1–230 meters.	May–November	--/--/1B.1	**No potential to occur.** The BSA lacks grasslands typically associated with this species. One CNDDB occurrence was recorded 1.17 miles northeast of the Project in 2008. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Ben Lomond spineflower *Chorizanthe pungens* var. *hartwegiana*	Annual herb that occurs on sandy soils in lower montane coniferous forests, particularly maritime ponderosa pine sandhills. 90–610 meters.	April–June	FE/--/1B.1	**No potential to occur.** The BSA lacks conifer forests typically associated with this species. No occurrences within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Monterey spineflower *Chorizanthe pungens* var. *pungens*	Annual herb that occurs in chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils. 3–450 meters.	April–June	FT/--/1B.2	**No potential to occur.** The BSA lacks suitable habitat typically associated with this species. The nearest CNDDB occurrence was recorded 1.35 miles southwest of the Project in 2017. Species not observed in the BSA during surveys conducted in the appropriate bloom period.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
Scotts Valley spineflower *Chorizanthe robusta* var. *hartwegii*	Annual herb that occurs on sandy soils in grasslands in Scotts Valley, Santa Cruz County. 200–300 meters.	April–July	FE/--/1B.1	**No potential to occur.** The BSA is located outside of the species' known elevation and habitat range. No occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
robust spineflower *Chorizanthe robusta* var. *robusta*	Annual herb that occurs in chaparral, cismontane woodland, coastal dunes, and coastal scrub with sandy or gravelly soils. 3–300 meters.	April–September	FE/--/1B.1	**No potential to occur.** The BSA lacks suitable chaparral, scrub, and dune habitat typically associated with this species. The nearest CNDDB occurrence was recorded 0.83 miles southeast of Project in 2011. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Mt. Hamilton fountain thistle *Cirsium fontinales* var. *campylon*	Perennial herb found in chaparral, cismontane woodlands, valley and foothill grassland, and serpentine seeps. 100–890 meters.	February–October	--/--/1B.2	**No potential to occur.** The BSA is located outside of the known elevation range for this species. No occurrences have been recorded within 5 miles of Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
seaside bird's-beak *Cordylanthus rigidus var. littoralis*	Annual herb occurs in coastal dunes within closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub habitat. 0–425 meters.	April–October	--/SE/1B.1	**No potential to occur.** The BSA lacks suitable habitat typically associated with this species. The nearest CNDDB occurrence was recorded approximately 4 miles southwest of the Project in 1930. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Santa Clara Valley dudleya *Dudleya abramsii* var. *setchellii*	Perennial herb found in serpentinite, rocky soils of cismontane woodland, and valley and foothill grassland.	April–October	FE/--/1B.1	**No potential to occur.** The BSA lacks serpentine soils that are typically associated with this species. No occurrences have been recorded within 5 miles of Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Eastwood's goldenbush *Ericameria fasciculata*	Perennial shrub occurs in closed-cone coniferous forest, chaparral, coastal dunes, and coastal scrub. Within openings on sandy soil. 30–275 meters.	July–October	--/--/1B.1	**No potential to occur.** The BSA lacks suitable coniferous forest, chaparral, dune, or scrub habitat typically associated within BSA. The nearest CNDDB occurrence was recorded approximately 4 miles South of the Project in 2001. Species not observed during the June 2019 field survey.
Ben Lomand buckwheat *Eriogonum nudum* var. *decurrens*	Perennial herb found in sandy soils among chaparral, cismontane woodland, and maritime ponderosa sandhills. 300–975 meters.	June–October	--/--/1B.1	**No potential to occur.** The BSA is located outside of the known elevation range for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
Hoover's button-celery *Eryngium aristulatum* var. *hooveri*	Annual to perennial herb found near coastal vernal pools. 5–45 meters.	(June) July (August)	--/--/1B.1	**No potential to occur.** No suitable vernal pool habitat was observed within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Sand-loving wallflower *Erysimum ammophilum*	Perennial herb found in chaparral, coastal dunes, and coastal scrub with sandy soils and openings. 0–60 meters.	February–June	--/--/1B.2	**No potential to occur.** No suitable chaparral, scrub or dune habitat within BSA. One occurrence 0.97 miles southeast of Project in 2011. Species not observed in BSA, survey conducted outside of bloom period.
Santa Cruz wallflower *Erysimum teretifolium*	Annual or perennial herb that occurs in sandy areas in coastal-sage scrub or chaparral. 100–400 meters.	February–July	FE/SE/1B.1	**No potential to occur.** The BSA is located outside of the known elevation range for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
minute pocket moss *Fissidens pauperculus*	A low water tolerant moss native to California.	N/A	--/--/1B.2	**No potential to occur.** The BSA lacks damp forested areas known to support this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in BSA.
fragrant fritillary *Fritillaria liliacea*	Bulbiferous herb found in cismontane woodland, coastal prairies, coastal scrub, and valley and foothill grassland; often associated with serpentinite. 3–410 meters.	February–April	--/--/1B.2	**No potential to occur.** The BSA lacks suitable woodland, scrub, and grassland habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys that were conducted outside of the appropriate bloom period.
Monterey (sand) gilia *Gilia tenuiflora* var. *arenaria*	Annual herb found in chaparral, cismontane woodland, coastal dunes, and coastal scrub in sandy soil with openings. 0–45 meters.	April–June	FE/ST/1B.2	**No potential to occur.** The BSA lacks habitat typically associated with this species. One CNDDB occurrence was recorded approximately 1 mile south of the Project in 2007. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
San Francisco gumplant *Grindelia hirsutula* var. *maritima*	Perennial herb that occurs in coastal bluff scrub, coastal scrub, and valley and foothill grassland. Often associated with sandy or serpentine derived soils. 15–400 meters.	June–September	--/--/3.2	**No potential to occur.** The BSA lacks suitable scrub and grassland habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Loma Prieta hoita *Hoita strobilina*	Perennial herb that occurs in mesic sites with serpentine soil among chaparral, cismontane woodland, and riparian woodland. 30–860 meters.	May–October	--/--/1B.1	**No potential to occur.** The BSA lacks serpentine soils that are known to support this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
Santa Cruz tarplant *Holocarpha macradenia*	An annual herb that occurs in clay or sandy soil among coastal prairie, coastal scrub, and valley and foothill grassland. 10–220 meters.	June–October	FT/SE/1B.1	**No potential to occur.** No suitable grassland or scrub habitat occurs within the BSA. One CNDDB occurrence was recorded 2.17 miles west of the Project in 2007. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Kellogg's horkelia *Horkelia cuneata* var. *sericea*	Perennial herb found in closed-cone coniferous forest, maritime chaparral, and coastal scrub and dunes with sandy or gravelly openings. 10–200 meters.	April–September	--/--/1B.1	**No potential to occur.** No suitable habitat within the BSA. One CNDDB occurrence was recorded 1.5 miles north of the Project in 1994. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
perennial goldfields *Lasthenia californica* var. *macrantha*	A perennial herb from the Asteraceae family. Occurs in coastal bluff scrub, coastal dunes, and coastal scrub. 10–190 meters.	January–November	--/--/1B.2	**No potential to occur.** The BSA lacks habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
smooth lessingia *Lessingia micradenia* var. *glabrata*	Annual herb that frequently occurs on serpentine in chaparral, cismontane woodland, grasslands, and roadsides. 10–880 meters.	(April–June) July–November	--/--/1B.2	**No potential to occur.** The BSA lacks serpentine soils that are typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in BSA during surveys that were conducted just outside of the typical bloom period.
arcuate bush-mallow *Malacothamnus arcuatus*	Perennial evergreen shrub found in chaparral and cismontane woodland. 15–355 meters.	April–September	--/--/1B.2	**No potential to occur.** No suitable woodland or chaparral habitat occurs within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Hall's bush-mallow *Malacothamnus hallii*	Perennial evergreen shrub found in chaparral and coastal scrub. 10–760 meters.	(April) May–September (October)	--/--/1B.2	**No potential to occur.** No suitable woodland or grassland habitat within BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Mt. Diablo cottonweed *Micropus amphibolus*	Annual herb found in rocky substrates in broadleaf upland forest, chaparral, cismontane woodland, and valley and foothill grassland. 45–825 meters.	March–May	--/--/3.2	**No potential to occur.** No suitable woodland or grassland habitat within BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted outside the appropriate bloom period.
woodland woollythreads *Monolopia gracilens*	Annual herb associated with serpentine soil. Often found in openings within broadleafed upland forest, chaparral, cismontane woodland, north coast coniferous forest, and valley and foothill grassland. 100–1,200 meters.	February–July	--/--/1B.2	**No potential to occur.** The BSA is located outside of the known elevation range and lacks serpentine soils. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
Dudley's lousewort *Pedicularis dudleyi*	Perennial herb that occurs in coastal chaparral, valley grasslands, and redwood forest. 0–350 meters.	March–June	--/SR/1B.2	**No potential to occur.** The BSA lacks habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project within the past 100 years. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Santa Cruz Mountains beardtongue *Penstemon rattanii* var. *kleei*	Perennial herb that occurs in chaparral, lower montane coniferous forest, and north coast coniferous forest. 400–1,100 meters.	May–June	--/--/1B.2	**No potential to occur.** The BSA is located outside of the known elevation range for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
white-rayed pentachaeta *Pentachaeta bellidiflora*	Annual herb that occurs in grassy and rocky areas. 0–620 meters.	March–May	FE/SE/1B.1	**No potential to occur.** The BSA lacks grassy or rocky habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted outside the appropriate bloom period.
Yadon's rein orchid *Piperia yadonii*	Perennial herb occurs in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral with sandy soil. 10–510 meters.	(February) May–August	FE/--/1B.1	**No potential to occur.** The BSA lacks suitable habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Choris' popcorn-flower *Plagiobothrys chorisianus* var. *chorisianus*	Annual herb that occurs in vernal pools and other wet areas among chaparral, coastal prairie, and coastal scrub habitats. 15–160 meters.	March–June	--/--/1B.2	**No potential to occur.** The BSA lacks vernally wet areas typically associated with this species. One CNDDB occurrence was recorded approximately 2.5 miles northwest of the Project in 1994. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
San Francisco popcorn-flower *Plagiobothrys diffusus*	Annual herb that occurs in coastal prairie and valley and foothill grassland. 60–360 meters.	March–June	--/SE/1B.1	**No potential to occur.** No suitable prairie or grassland habitat occurs within the BSA. One CNDDB occurrence was recorded approximately 2.5 miles northwest of the Project in 2001. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Scotts Valley polygonum *Polygonum hickmanii*	Annual herb that occurs in open, seasonally dry grasslands. 200–300 meters.	May–August	FE/SE/1B.1	**No potential to occur.** The BSA is located outside of the known elevation range for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.

Species Name	Habitat and Distribution	Flower Season	Legal Status Federal/ State/CNPS	Rationale for Expecting Presence or Absence
pine rose *Rosa pinetorum*	Perennial shrub found in closed-cone coniferous forest. 2–300 meters.	May–July	--/--/1B.2	**No potential to occur.** The BSA lacks coniferous forest typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
most beautiful jewel-flower *Streptanthus albidus* var. *peramoenus*	Annual herb found in chaparral, cismontane woodlands, and valley and foothill grasslands in serpentine soil. 110–1,000 meters.	(March) April–June (October)	--/--/1B.2	**No potential to occur.** The BSA lacks suitable habitat typically associated with this species and is outside of the elevation range. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Santa Cruz clover *Trifolium buckwestiorum*	Annual herb occurs in broadleaf upland forest, cismontane woodland, and coastal prairies with gravelly margins. 105–610 meters.	April–October	--/--/1B.1	**No potential to occur.** The BSA lacks suitable habitat typically associated with this species and is outside of the elevation range. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
saline clover *Trifolium hydrophilum*	Annual herb that occurs in salt marshes and open areas in alkaline soils. 0–300 meters.	April–June	--/--/1B.2	**No potential to occur.** The BSA lacks salt marshes and alkaline soils associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.
Pacific Grove clover *Trifolium polyodon*	Annual herb usually associated with mesic sites in closed-cone coniferous forest, coastal prairies, meadows and seeps, and valley and foothill grassland. 5–120 meters.	April–June	--/SR/1B.1	**Potential to occur.** The outer banks of the coastal and valley freshwater marsh may provide suitable habitat for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA during surveys conducted in the appropriate bloom period.

General references: Unless otherwise noted all habitat and distribution data provided by CNDDB and CNPS.

Status Codes

--= No status

Federal: FE = Federal Endangered; FT=Federal Threatened;

State: SE=State Endangered; ST= State Threatened; SR= State Rare

California Native Plant Society (CNPS):
Rank 1B = rare, threatened, or endangered in California and elsewhere.
Rank 2 = rare, threatened, or endangered in California, but more common elsewhere.
Rank 3 = plants that about which more information is needed.

Threat Code:
_.1 = Seriously endangered I California (over 80% of occurrences threatened / high degree and immediacy of threat)
_.2 = Fairly endangered in California (20-80% occurrences threatened)
_.3 = Not very endangered I California (<20% of occurrences threatened or no current threats known)

Table C-2. Natural Communities of Concern Investigated for Potential Occurrence

Community	Description	Rationale for Expecting Presence or Absence
central dune scrub	A back dune plant community characterized by low growing, drought tolerant shrubs that develop considerable cover. Diagnostic species include *Ericameria ericoides* and *Lupinus chamissonis*.	**Absent.** The BSA does not support central dune scrub habitat.
coastal and valley freshwater marsh	**A wetland community that is found in areas of permanently or prolonged freshwater saturation without significant current or flow. Vegetation is dominated by perennial emergent monocots including cattails and rushes.**	**Present. This habitat type is present in the BSA.**
northern coastal salt marsh	Marsh habitat supporting herbaceous, suffrutescent, salt tolerant hydrophytes often active in summer and dormant in winter. Characteristic species include *Jaumea carnosa*, *Limonium californicum*, and *Frankenia salina*. Developed around Humboldt Bay, Tomales Bay, San Francisco Bay, Elkhorn Slough, and Morro Bay.	**Absent.** The BSA does not support northern coastal salt marsh habitat.

Table C-3. Special-Status Wildlife Species Investigated for Potential Occurrence

Species Name	Habitat and Distribution	Legal Status Federal/State/CDFW	Rationale for Expecting Presence or Absence
Insects			
Smith's blue butterfly *Euphilotes enoptes smithi*	Occurs in coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz counties. Utilizes *Eriogonum latifolium* and *Eriogonum parvifolium* as a host plant for larval and food.	FE/--/--	**No potential to occur.** No suitable woodland or prairie habitat within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species and host plant were not observed in the BSA.
bay checkerspot butterfly *Euphydryas editha bayensis*	Medium sized; occurs in habitats with shallow, serpentine-derived or similar soils. Primary larval host plant is dwarf plantain (*Plantago erecta*) and occasionally purple owl's clover (*Castilleja densiflora* or *C. exserta*).	FT/--/--	**No potential to occur.** The BSA lacks serpentine soils and habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
Zayante band-winged grasshopper *Trimerotropis infantilis*	Occurs in sandhills in Santa Cruz Mountains.	FE/SE/--	**No potential to occur.** The BSA is located outside of the known range for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
Fish			
tidewater goby *Eucyclogobius newberryi*	Occurs in brackish shallow lagoons and lower stream reaches where water is fairly still, but not stagnant.	FE/--/CSC	**No potential to occur.** No suitable brackish habitat within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
Central Valley steelhead *Oncorhynchus mykiss*	Clear, cool water with abundant in-stream cover, well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio.	FT, PCH /-- /CSC	**No potential to occur.** No suitable stream habitat for this species occurs within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
Central California Coast steelhead Distinct Population Segment (DPS) *Oncorhynchus mykiss irideus*	Clear, cool water with abundant in-stream cover, well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio.	FT, PCH /-- /CSC	**No potential to occur.** No suitable stream habitat for this species occurs within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
South-Central California Coast steelhead DPS *Oncorhynchus mykiss irideus*	Clear, cool water with abundant in-stream cover, well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio.	FT, PCH /-- /CSC	**No potential to occur.** No suitable stream habitat for this species occurs within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
longfin smelt *Spirinchus thaleichthys*	Anadromous; found in California's bay, estuary, and nearshore environments from San Francisco Bay north to Lake Earl, near the Oregon border. The San Francisco Estuary and the Sacramento-San Joaquin Delta supports the largest longfin smelt population in California.	FC/ST/CSC	**No potential to occur.** No suitable estuary habitat for this species occurs within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.

Species Name	Habitat and Distribution	Legal Status Federal/State/CDFW	Rationale for Expecting Presence or Absence
Amphibians			
California tiger salamander *Ambystoma californiense*	Occurs in grasslands or oak woodlands that support natural ephemeral pools or ponds that mimic them. This species requires seasonal water for breeding and small mammal burrows, crevices in logs, piles of lumber, and shrink-swell cracks in the ground for refuges. To be suitable, aquatic sites must retain at least 30 centimeters of water for a minimum of 10 weeks in the winter.	FT/ST/CSC	**No potential to occur.** While the coastal and valley freshwater marsh may provide suitable aquatic habitat, there is no suitable upland grassland habitat within over a mile of this area. The BSA is highly disturbed and fragmented making it unsuitable for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
Santa Cruz long-toed salamander *Ambystoma macrodactylon croceum*	Endemic to central coastal California near Santa Cruz. Breeds in ephemeral or perennial ponds. Occupies dense riparian vegetation suck as willows, thick costal scrub, and oak woodland.	FE/SE/FP	**Low potential to occur.** The coastal and valley freshwater marsh may provide marginal aquatic breeding habitat. This feature holds water year-round whereas this species typically breeds in ephemeral ponds. Furthermore, the surrounding area lacks densely vegetated areas typically associated with this species. One CNDDB occurrence was recorded 0.27 miles north of the Project in 2017. Species not observed during the June 2019 field survey.
California red-legged frog *Rana draytonii*	Occurs in aquatic habitats with little or no flow and surface water depths to at least 2.3 feet. Presence of fairly sturdy underwater supports such as cattails.	FT /--/CSC	**Potential to occur.** The coastal and valley freshwater marsh observed in the BSA may provide suitable aquatic breeding habitat for this species. Nearby drainage features and agricultural areas may provide dispersal habitat for this species. The nearest CNDDB occurrence was recorded 0.5 miles southwest of the Project in 2017. Species not observed during the June 2019 field survey.
Reptiles			
coast horned lizard *Phrynosoma coronatum (blainvillii* population)	Frequents a wide variety of habitats, commonly occurring in lowlands along sandy washes, coastal sage scrub, and chaparral in arid and semi-arid climate conditions. Species prefers friable, rocky or shallow sandy soils.	--/--/CSC	**No potential to occur.** The BSA lacks habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	Occurs in densely vegetated freshwater ponds and marshes, preys on California red-legged frog so uses similar habitat	FE/SE/--	**No potential to occur.** The BSA is located outside of the species range (southern range is Santa Cruz Mountains). No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
Birds			
tricolored blackbird *Agelaius tricolor*	Requires open water, protected nesting substrate such as cattails or tall rushes, and foraging area with insect prey.	MBTA/--/CSC	**No potential to occur.** No suitable nesting habitat occurs within the BSA. Coastal and valley freshwater marsh in the BSA is not dense enough to support a nesting colony. An occurrence approximately 0.5 mile west of the Project in 2011. Species not observed in the BSA.

Species Name	Habitat and Distribution	Legal Status Federal/State/CDFW	Rationale for Expecting Presence or Absence
golden eagle *Aquila chrysaetos*	Usually occurring in mountainous areas with varying vegetative cover; removed from people. May forage in grasslands and other open habitats. Nests on cliff edges and rarely in tall trees.	MBTA/-- /FP	**No potential to occur.** The BSA lacks suitable nesting habitat and open space grassland areas typically associated with this species. Insufficient breeding habitat. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
burrowing owl *Athene cunicularia*	Occurs in open, dry grasslands, deserts, and scrublands. Subterranean nester, dependent upon burrowing mammals.	MBTA/-- /CSC	**No potential to occur.** No suitable grassland, desert, or scrub habitat within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
marbled murrelet *Brachyramphus marmoratus*	Spends most of the non-breeding season in off-shore or near-shore environments near coniferous forests. The only California alcid species to nests inland. Typically nests in the upper branches of redwoods or doug-fir forests. In CA, builds its nests in tall trees with lichens and mosses.	MBTA, FT/SE/--	**No potential to occur.** No suitable nesting or foraging habitat within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
western snowy plover *Charadrius nivosus*	Occurs on sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	MBTA, FT/ --/CSC	**No potential to occur.** No suitable nesting or foraging habitat within the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
white-tailed kite *Elanus leucurus*	Occurs in open grasslands, meadows, or marshlands for foraging close to isolated trees for nesting and perching.	MBTA/--/FP	**Potential to occur.** Isolated trees within the BSA may provide suitable nesting habitat, whereas nearby agricultural and wetland areas may provide suitable for foraging prey. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
American peregrine falcon *Falco peregrinus anatum*	Occurs in riparian areas and coastal and inland wetlands are important habitats yearlong, especially in non-breeding seasons. Migrants occur along the coast and in the western Sierra Nevada in spring and fall.	MBTA, Delisted/--/FP	**No potential to occur.** No suitable nesting habitat within the vicinity of the BSA. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
common yellowthroat *Geothlypis trichas sinuosa*	Occurs in wet meadow, fresh emergent wetland, saline emergent wetland habitats, and valley foothill riparian.	MBTA/--/CSC	**No potential to occur.** The BSA lacks suitable riparian habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
bald eagle *Haliaeetus leucocephalus*	Occurs along ocean shore, lake margins and rivers for both nesting and wintering. Most nests within 1 mile of water.	MBTA/SE/--	**No potential to occur.** The BSA lacks suitable nesting and foraging habitat for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
osprey *Pandion haliaetus*	Associated with large, fish-bearing waters. Nests in large snags, dead-topped trees, on cliffs, or on human made structures.	MBTA/--/CSC	**No potential to occur.** The BSA lacks suitable nesting and foraging habitat for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.

Species Name	Habitat and Distribution	Legal Status Federal/State/CDFW	Rationale for Expecting Presence or Absence
Ridgway's rail *Rallus longirostris obsoletus*	Occurs within salt and brackish marshes dominated by pickleweed and Pacific cordgrass. Currently, this species is restricted to marsh areas within the vicinity of San Francisco Bay. The last California clapper rail to be sighted in Morro Bay was documented in 1939.	MBTA, FE/SE/--	**No potential to occur.** The BSA lacks suitable salt marsh habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
bank swallow *Riparia riparia*	Nests in colonies in vertical sand banks. Forages over meadows and water.	MBTA/ST/--	**No potential to occur.** The BSA lacks suitable nesting habitat for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
Class Aves Other migratory bird species (nesting)	Found in annual grasslands, coastal scrub, chaparral, and oak woodlands may provide nesting habitat.	MBTA/--/--	**Potential to occur.** Trees, shrubs, and buildings observed throughout the BSA may provide suitable nesting habitat for avian species protected under the MBTA.
Mammals			
pallid bat *Antrozous pallidus*	Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Night roosts may be in more open sites, such as porches and buildings.	--/--/CSC	**Potential to occur.** Although no suitable large crevices are present within the project site for large maternity colonies, buildings and trees observed throughout the BSA may provide suitable roosting habitat for individual roosting and small groups of maternity roosting pallid bats. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
Townsend's big-eared bat *Corynorhinus townsendii*	Occurs in a wide variety of habitats; most common in mesic (wet) sites. May use trees for day and night roosts; however, requires caves, mines, rock faces, bridges or buildings for maternity roosts. Maternity roosts are in relatively warm sites.	--/--/CSC	**Potential to occur.** Tress and buildings in the BSA may provide roosting habitat for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
Santa Cruz kangaroo rat *Dipodomys venustus*	Occurs only in the Santa Cruz sandhills.	--/--/CSC	**No potential to occur.** The BSA is located outside of the known range for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	Occurs in oak woodlands and chaparral in Coastal Ranges including Santa Cruz Mountains and foothills.	--/--/CSC	**No potential to occur.** The BSA lacks suitable chaparral or woodland habitat for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. No woodrat middens were observed in the BSA.
Salinas harvest mouse *Reithrodontomys megalotis distichlis*	Occurs in the region of Monterey Bay, in coastal estuaries and adjacent upland grasslands.	--/--/CSC	**No potential to occur.** The BSA lacks suitable habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.

Species Name	Habitat and Distribution	Legal Status Federal/State/CDFW	Rationale for Expecting Presence or Absence
American badger *Taxidea taxus*	Occurs in open stages of shrub, forest, and herbaceous habitats; needs uncultivated ground with friable soils.	--/--/CSC	**No potential to occur.** The BSA lacks suitable habitat typically associated with this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.
San Joaquin kit fox *Vulpes macrotis mutica*	The historic range of the San Joaquin kit fox included most of the San Joaquin Valley from San Joaquin County southward to southern Kern County (USFWS, 1998). Currently, kit foxes occur in the remaining native valley and foothill grasslands and saltbush scrub communities of the valley floor and surrounding foothills from southern Kern County north to Merced County.	FE/ST/--	**No potential to occur.** The BSA is located outside of the known range for this species. No CNDDB occurrences have been recorded within 5 miles of the Project. Species not observed in the BSA.

General references: Unless otherwise noted all habitat and distribution data provided by CNDDB.

Status Codes

--= No status

Federal: FE = Federal Endangered; FT= Federal Threatened; FC= Federal Candidate; CH= Federal Critical Habitat; PCH= Proposed Federal Critical Habitat; MBTA= Protected by Federal Migratory Bird Treaty Act

State: SE= State Endangered; ST= State Threatened

California Department of Fish and Game: CSC= California Special Concern Species; FP= Fully Protected Species; SA= Not formally listed but included in CDFG “Special Animal” List.

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APPENDIX D

Photo Documentation

Photo D-1. View facing west from east end of F8 pipeline at pump station.

Photo D-2. View facing west along proposed F1 pipeline.

Photo D-3. View facing south showing ruderal vegetation typical of that observed throughout BSA.

Photo D-4. View facing west showing Water Feature 1, located along northern portion of F pipeline.

Photo D-5. View facing south showing developed and ruderal areas typical of that observed throughout BSA.

Photo D-6. View facing west showing open water habitat (Water Feature 5) typical of ponded areas observed throughout BSA.

Photo D-7. View facing south showing coastal and valley freshwater marsh (Water Feature 8) located along southern end of F pipeline.

APPENDIX E

List of Wildlife Species Observed

Table E-1. Vertebrate Species Observed or Detected by Sign (July 10, 2019)

Scientific Name	Common Name
Amphibia	***Amphibians***
Rana catesbeiana	American bullfrog
Pseudacris regilla	Pacific tree frog
Aves	***Birds***
Buteo jamaicensis	red-tailed hawk
Cathartes aura	turkey vulture
Corvus brachyrhynchos	American crow
Carpodacus mexicanus	house finch
Mimus polyglottos	northern mockingbird
Zenaida macroura	mourning dove
Petrochelidon pyrrhonota	cliff swallow
Melozone crissalis	California towhee
Junco hyemalis	dark-eyed junco
Mammalia	***Mammals***
Felis catus	domestic cat
Canis lupus familiaris	domestic dog
Procyon lotor	raccoon
Otospermophilus beecheyi	California ground squirrel
Thomomys bottae	Botta's pocket gopher
Reithrodontomys spp.	harvest mouse
Reptilia	***Reptiles***
Thamnophis sirtalis infernalis	California red-sided gartersnake
Sceloporus occidentalis	western fence lizard

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APPENDIX B

Cultural Resources Survey Report

Cultural Resources Survey Report for the Coastal Distribution System F-Pipeline Project, Santa Cruz County, California

OCTOBER 2019

PREPARED FOR

Pajaro Valley Water Management Agency

PREPARED BY

SWCA Environmental Consultants

CULTURAL RESOURCES SURVEY REPORT FOR THE COASTAL DISTRIBUTION SYSTEM F-PIPELINE PROJECT, SANTA CRUZ COUNTY, CALIFORNIA

Prepared for

Pajaro Valley Water Management Agency
36 Brennan Street
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SWCA Project No. 53405

SWCA Cultural Resources Report No. 19-495

October 2019

Keywords: Negative Results, USGS Watsonville West, California Quadrangle, Township 12 South, Range 01 East, Sections 11, 14,

Archaeological and other heritage resources can be damaged or destroyed through uncontrolled public disclosure of information regarding their location. This document contains sensitive information regarding the nature and location of archaeological sites that should not be disclosed to the general public or unauthorized persons.

Information regarding the location, character, or ownership of a cultural resource is exempt from the Freedom of Information Act pursuant to 16 USC 470w-3 (National Historic Preservation Act) and 16 USC Section 470(h) (Archaeological Resources Protections Act).

EXECUTIVE SUMMARY

Purpose and Scope: The Pajaro Valley Water Management Agency (PV Water; formerly referred to as PVWMA) is proposing upgrades to PV Water's Coastal Distribution System (CDS) and associated water supply facilities located in Santa Cruz County, California. The CDS F-Pipeline Project (F Line Project or Project) includes construction of new pipelines (expansions to the existing CDS) that will allow the distribution of water to additional growers in Santa Cruz County via the expanded CDS. The Project is located approximately 3.7 miles southwest of the city of Watsonville in unincorporated Santa Cruz County. The Project is partially funded through an Integrated Regional Water Management Drought Emergency Grant from Proposition 84 – The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, issued through the California Department of Water Resources.

PV Water retained SWCA Environmental Consultants (SWCA) to provide environmental support services, including cultural resources studies consisting of a cultural resources records search and literature review, Native American coordination, a cultural resources survey, and preparation of a cultural resources technical report in support of the Project.

This study is compliant with California Public Resources Code (PRC) Section 5024.1, Sections 21083.2 and 21084.1 of the California Environmental Quality Act (CEQA) (California PRC Section 21000 et. seq.), and Section 15064.5 of the State CEQA Guidelines (California Code of Regulations [CCR] Section 15000 et. seq.). PRC Section 5024.1 requires the identification and evaluation of historical resources that may be affected by a proposed project.

Dates of Investigation: SWCA requested a California Historical Resources Information System (CHRIS) records search on May 22, 2019. The searches were conducted by staff at the Northwest Information Center (NWIC) located at Sonoma State University, Rohnert Park, California. SWCA requested a search of the Native American Heritage Commission (NAHC) Sacred Lands File on May 22, 2019; SWCA received the results on June 7, 2019, and sent letters to identified tribal representatives on June 15, 2019. Follow-up calls and emails were conducted on August 8 and 9, 2019. SWCA performed an intensive pedestrian survey of the Project area on July 2 and 3, 2019.

Summary of Findings: The records search was conducted by staff at the NWIC on June 10, 2019, and revealed that no previously recorded cultural resources are within or adjacent to the Project area. SWCA conducted an intensive pedestrian survey of the Project area on July 2 and 3, 2019. No cultural resources were identified as a result of the field survey. The NAHC Sacred Land File search response stated the results were "positive" but provided no further information regarding the nature or reasoning. Follow-up letters and phone outreach to identified tribal representatives did not result in any responses, and no further information was garnered from the effort.

While it is clear from prior studies the general Project vicinity is sensitive for the presence of known and undocumented prehistoric archaeological resources, the lack of identified resources in the Project area as a result of this and prior studies indicates diminished sensitivity for encountering obscured and/or buried resources during Project implementation. The majority (90%) of the Project area was previously subject to cultural resources study, including pedestrian survey, with parallel findings.

Recommendations: At this time, no further cultural resources study is recommended for the Project.

Although unlikely, buried or obscured archaeological resources may be encountered during construction. In the event that archaeological resources are inadvertently discovered during construction, work in the immediate vicinity of the find (within 25 feet [7.6 meters]) must stop until a qualified archaeologist can

evaluate the significance of the find. Construction activities may continue in other areas beyond the 25-foot stop work area. If the discovery proves significant under CEQA, additional mitigation may be warranted.

The discovery of human remains is always a possibility during ground disturbances; State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County of Santa Cruz (County) Coroner has made a determination of origin and disposition pursuant to California PRC Section 5097.98. The County Coroner must be notified of the find immediately, and all work shall cease in the immediate vicinity of the find. If the human remains are determined to be ancient or likely Native American, the coroner will notify the NAHC, which will designate and notify a Native American Most Likely Descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burials.

Disposition of Data: The final cultural resources survey report and any subsequent related reports will be filed with PV Water, the NWIC, and SWCA's Half Moon Bay office. All field notes, photographs, and records related to the current study are on file at the SWCA Half Moon Bay office.

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INTRODUCTION

The Pajaro Valley Water Management Agency (PV Water; formerly referred to as PVWMA) is proposing upgrades to PV Water's Coastal Distribution System (CDS) and associated water supply facilities located in Santa Cruz County, California. The CDS F-Pipeline Project (F Line Project or Project) includes construction of new pipelines (expansions to the existing CDS) that will allow the distribution of water to additional growers in Santa Cruz County via the expanded CDS. The Project is located approximately 3.7 miles southwest of the city of Watsonville in unincorporated Santa Cruz County (Figures 1 and 2). The Project is partially funded through an Integrated Regional Water Management Drought Emergency Grant from Proposition 84 – The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, issued through the California Department of Water Resources.

PV Water retained SWCA Environmental Consultants (SWCA) to provide environmental support services, including cultural resources studies consisting of a cultural resources records search and literature review, Native American coordination, a cultural resources survey, and preparation of a cultural resources technical report in support of the Project. This study is compliant with California Public Resources Code (PRC) Section 5024.1, Sections 21083.2 and 21084.1 of the California Environmental Quality Act (CEQA) (California PRC Section 21000 et. seq.), and Section 15064.5 of the CEQA Guidelines (California Code of Regulations [CCR] Section 15000 et. seq.). PRC Section 5024.1 requires the identification and evaluation of historical resources that may be affected by a proposed project.

Project Location

The Project area is located along San Andreas Road to the southwest of the city of Watsonville in Santa Cruz County, California (see Figures 1 and 2). Situated on the U.S. Geological Survey (USGS) Watsonville West, California 7.5-minute topographic quadrangle map, the Project area is within Sections 11 and 14 of Township 12S and Range 01E. Elevations range between approximately 87 and 260 feet above mean sea level. The Pajaro River is approximately 1.65 miles southeast of the Project area.

Project Background

PV Water was the lead agency in developing the PV Water Local Water Supply and Distribution Project Final Environmental Impact Report (FEIR) (State Clearinghouse #1997021006) (herein referred to as the 1999 EIR), which included a series of facility projects that would more fully utilize local water supply sources and distribute these sources (in addition to imported water) to service area users. The 1999 EIR found that the Local Water Supply and Distribution Project would have less-than-significant impacts to cultural resources with the implementation of mitigation measures. PV Water was the lead agency in developing the PV Water Basin Management Plan (BMP) Update FEIR (State Clearinghouse #2000062030) (herein referred to as the 2014 EIR), which included seven components (or primary projects and programs) that were considered adequate to solve more than 90% of the seawater intrusion and basin overdraft problems in the region. Additional projects were identified for potential future implementation should the selected portfolio not meet the planning-level expectations with respect to supply yield or demand offset using an adaptive management method of project implementation. One of these additional projects was the CDS Pipeline Expansion. The 2014 EIR found that the BMP Update would have less-than-significant impacts to cultural resources with implementation of mitigation measures. PV Water has since included additional segments to the proposed CDS Pipeline Expansion that were not included in 1999 EIR or 2014 EIR, which are the subject of this Cultural Resources Survey Report.

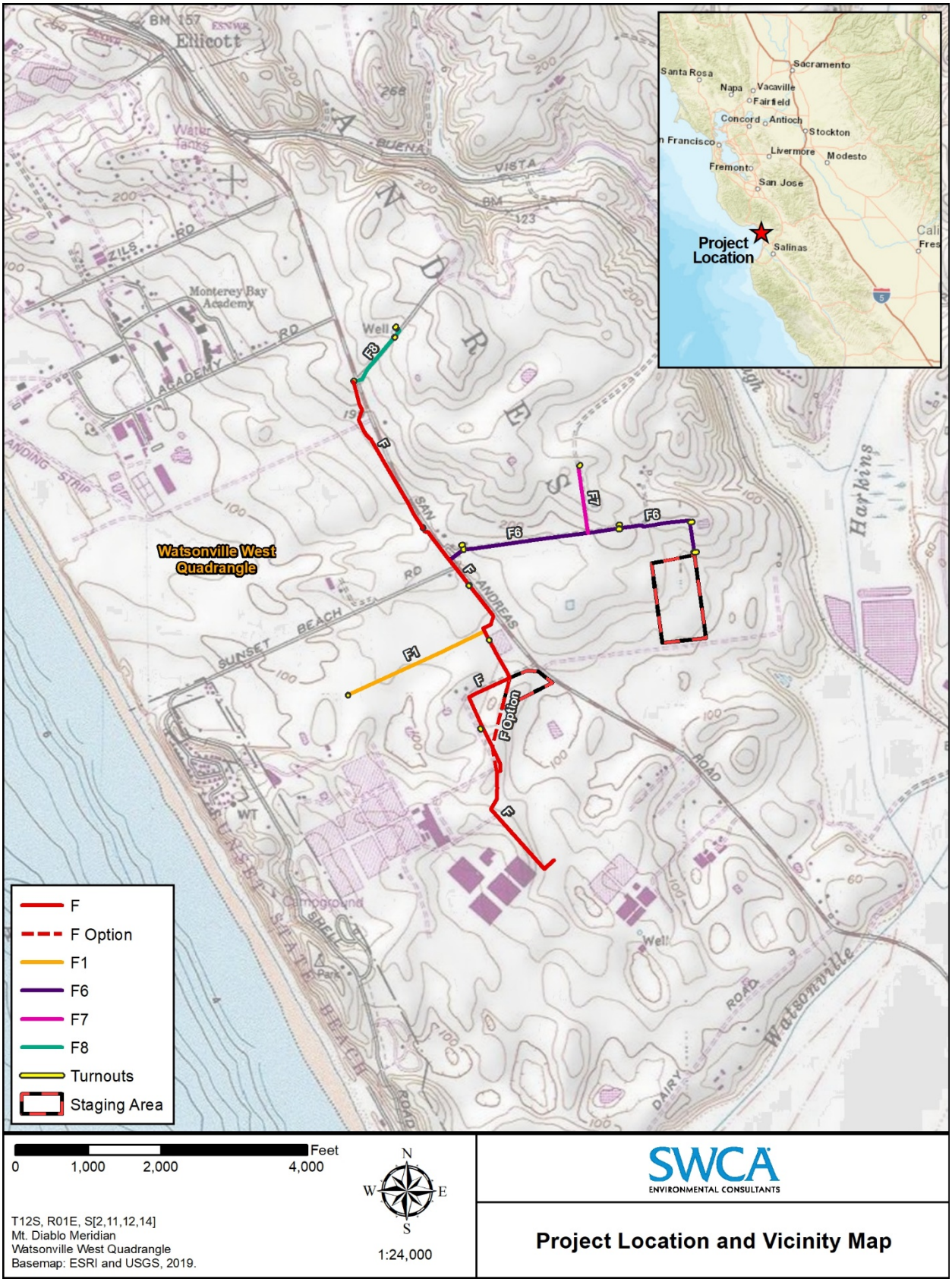

Figure 1. Project location and vicinity map.

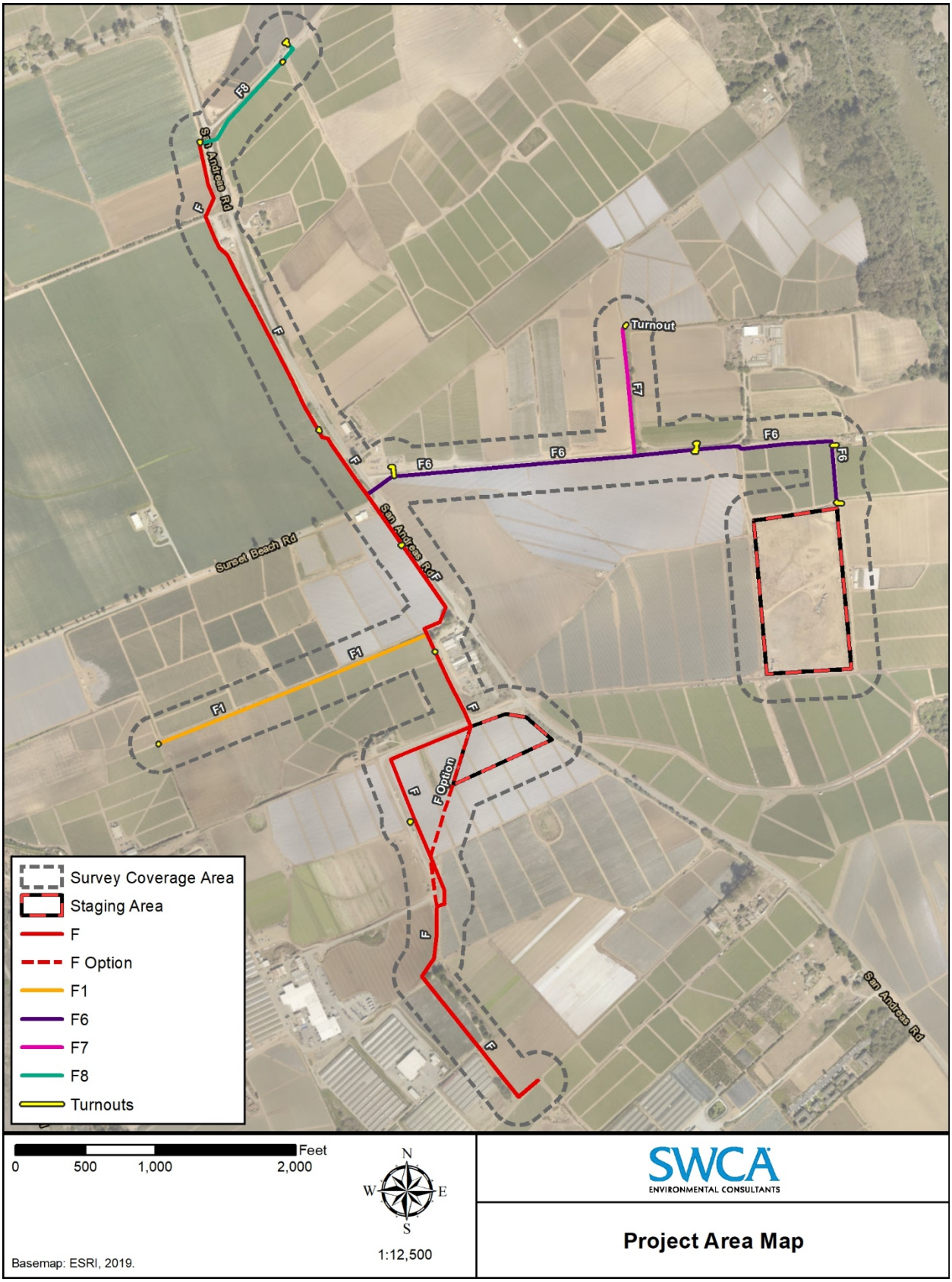

Figure 2. Project area map.

Project Description

The purpose of PV Water's CDS is to provide supplemental irrigation supply to agricultural lands in the coastal area impacted by seawater intrusion. The Project is an integral component of the CDS and goals of PV Water's overall best management practice of stopping groundwater overdraft and halting seawater intrusion by increasing the use of delivered, supplemental irrigation water and decreasing coastal groundwater production. The existing CDS provides a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz counties. The Project will allow approximately 1,300 additional acres of agricultural lands along the coast to be irrigated with supplemental irrigation supply water instead of groundwater, thereby reducing seawater intrusion in the Pajaro Valley's groundwater supply.

The proposed F, F1, F6, F7, and F8 pipelines are composed of approximately 3 miles of High Density Polyethylene (HDPE) distribution piping ranging from 10 to 30 inches in diameter and 15 agricultural turnouts designed to provide approximately 2,600 acre-feet per year of supplemental irrigation water to 1,300 irrigated acres in addition to the existing 5,100-acre service area (CDS). Construction of the Project will result in the disturbance of approximately 27.4 acres, including temporary and permanent easements and staging areas.

Construction will be completed in a phased approach, including vegetation clearing, soil excavation, pipe installation, and trench backfilling. The minimum depth of pipeline cover is anticipated to be approximately 5 feet for agricultural lands and approximately 4 feet for all other areas. The maximum depth of pipeline cover is not anticipated to exceed 10 feet. Trench excavations for the pipeline will be approximately 3 to 6.5 feet wide.

REGULATORY SETTING

California Environmental Quality Act

This study was completed to comply with the provisions of CEQA. CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (CCR Section 21084.1). If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require that reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. If such resources cannot be left undisturbed, mitigation measures are required (Section 21083.2(a), (b), and (c)).

Section 21083.2(g) states that "a unique archaeological resource" is:

> an archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that is [sic] meets any of the following criteria:
>
> (1) Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
>
> (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
>
> (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person. [emphasis in the original]

A historical resource is a resource listed in, or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (Section 21084.1), a resource included in a local register of historical resources (CCR Section 15064.5(a)(2)), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (CCR Section 15064.5(a)(3)).

PRC Section 5024.1, CCR Section 15064.5, and PRC Sections 21083.2 and 21084.1 were used as the basic guidelines for this study. PRC Section 5024.1 requires an evaluation of historical resources to determine their eligibility for listing on the CRHR. The purpose of the CRHR is to maintain listings of the state's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP) and are enumerated below.

According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

- is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- is associated with the lives of persons important in our past;
- embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or
- has yielded, or may be likely to yield, information important in prehistory or history.

Impacts to significant cultural resources that adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. These impacts could result from "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (State CEQA Guidelines Section 15064.5 (b)(1), 2000). Material impairment is defined as demolition or alteration "in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register…." (State CEQA Guidelines Section 15064.5(b)(2)(A)).

The disposition of burials falls first under the general prohibition on disturbing or removing human remains under California Health and Safety Code Section 7050.5. More specifically, remains suspected to be Native American are treated under CEQA (CCR Section 15064.5) and under PRC Section 5097.98, which specifies the process to be followed in the event that remains are discovered. If human remains are discovered during the construction of the proposed Project, no further disturbance to the site shall occur, and the County of Santa Cruz (County) Coroner must be notified (PRC 15064.5 and 5097.98). If the County Coroner determines the remains to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 48 hours. The NAHC shall identify the person or persons it believes to be the Most Likely Descendant (MLD) of the deceased, and the MLD may then make recommendations as to the disposition of the remains.

NATIVE AMERICAN COORDINATION

On May 22, 2019, SWCA requested a search of the Sacred Lands File from the NAHC. SWCA received a response letter via email from the NAHC on June 7, 2019, stating that the results were positive and that SWCA should contact the Costanoan Ohlone Rumsen-Mutsen Tribe at (831) 728-8471 for more

information. The NAHC also provided a list of five Native American groups (including the Costanoan Ohlone Rumsen-Mutsen Tribe) and individuals who may have knowledge of cultural resources in the Project area and on July 12, 2019, SWCA mailed each of the contacts identifying the Project location and requesting input (Appendix A). Follow-up calls were conducted on August 8 and 9, 2019. To date no responses have been received from the letters or follow-up calls to the identified tribal contacts, including the Costanoan Ohlone Rumsen-Mutsen Tribe.

METHODS

Literature Review

On May 23, 2019, SWCA requested a search of the California Historical Resources Information System (CHRIS) at the Northwest Information Center (NWIC) located at Sonoma State University, Rohnert Park, California. The search included any previously recorded cultural resources and investigations within a 0.25-mile (0.4-kilometer) radius of the Project area.

Field Methodology

Survey

SWCA Archaeologist Morgan Bird conducted an intensive-level pedestrian survey of the Project area on July 2 and 3, 2019. The pedestrian survey was conducted to identify and record any cultural resources that may occur in the Project area. The intensive-level surveys consisted of systematic surface inspection with transects walked at 15-meter intervals or less to ensure that all surface-exposed artifacts and sites within the Project area and access routes could be identified. Mr. Bird also examined the ground surface for the presence of prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools), historical artifacts (e.g., metal, glass, ceramics), sediment discolorations that might indicate the presence of a cultural midden, and depressions and other features that might indicate the former presence of structures or buildings (e.g., post-holes, foundations).

RESULTS

Literature Review

A letter from the NWIC summarizing the results of the records search is provided in Appendix B.

Previously Conducted Cultural Resource Studies

Results of the cultural resources records search revealed that two previous cultural resource investigations were conducted within 0.25 mile (402 meters) of the Project area between 1976 and 2000, and four cultural resource investigations were conducted within the Project area between 1977 and 2005 (Table 1). Of the six previously conducted studies within the current Project area, there is approximately 90% overlap with the Project area.

Table 1. Cultural Resources Studies in the Records Search Area

NCIC Report Number	Author	Year	Study Title	Relationship to Project Area
S-003766	Unknown	1976	Archaeological Test Excavations and Impact Evaluations, Pajaro Headlands, Santa Cruz County, California	Outside (within 0.25-mile radius)
S-003899	David Chavez	1977	Cultural Resources Evaluation of Properties for City of Watsonville, Proposed Industrial Washwater Disposal Program – Phase I, Watsonville, Santa Cruz County, California	Within
S-003964	Unknown	1977	Santa Cruz Regional Wastewater Treatment System Project, Santa Cruz County, California	Within
S-022657	Izaak Sawyer, Laurie Pfeiffer, Karen Rasmussen, and Judy Berryman	2000	Phase 1 Archaeological Survey Along the Onshore Portions of the Global West Fiber Optic Cable Project	Outside (within 0.25-mile radius)
S-029577	John Holson	2004	Supplemental Pajaro Coastal Distribution Survey (letter report)	Within
S-029749	Kevin M. Bartoy	2005	Archaeological Survey of J-Line, K-Line, F-Line and Import Area for PVWMA, Monterey County (letter report)	Within

PRIOR STUDIES WITHIN THE PROJECT AREA

S-003899

In 1976 David Chavez of Holman and Chavez Consulting Archaeologists conducted a 1,400-acre archaeological survey over the Dupont and Chamberlain properties to determine the feasibility of reclaiming wastewater for the Watsonville Food Processors Association. Of the 1,400 acres listed in the study, approximately 70% of the Dupont property was subjected to intensive pedestrian survey. The Chamberlain property had been previously surveyed by qualified archaeologists and was not surveyed again. During the course of the survey effort, four previously unrecorded archaeological resources were encountered. The study boundaries for *Cultural Resources Evaluation of Properties for City of Watsonville, Proposed Industrial Washwater Disposal Program – Phase I, Watsonville, Santa Cruz County, California* overlap with approximately 30% of the current Project area.

S-003964

In 1977 Ann S. Peak & Associates conducted an archaeological survey in an effort to upgrade and improve the existing wastewater treatment system in the area. During the field assessment portion of the study, the entire route of the Sewage Transmission Line, the distribution lines for reclaimed water, the alternative plant sites, the expansion area at Neary's Lagoon, the reservoir area near the Monterey Bay Academy, and the outfall alignment were subject to pedestrian survey. During the course of the field study, two previously unrecorded sites were observed. The study boundaries for *Santa Cruz Regional Wastewater Treatment System Project, Santa Cruz County, California* overlap with approximately 30% of the current Project area.

S-029577

In 2004 John Holson of Pacific Legacy conducted a cultural resources study along 15 miles of proposed pipeline in Santa Cruz and Monterey Counties to determine potential impacts to cultural resources from the proposed construction of the Pajaro Valley CDS pipeline. Of the 15 miles of pipeline proposed, 7 miles of new pipeline alignment was surveyed. No new cultural resources were identified as a result of

the survey effort. The study boundaries for *Supplemental Pajaro Coastal Distribution Survey (letter report)* overlap with approximately 15% of the current Project area

S-029749

In 2005 Kevin Bartoy of Pacific Legacy conducted an archaeological survey of the J-Line, K-Line, F-Line, and Import Area for the Pajaro Valley CDS pipeline to evaluate impacts to cultural resources by construction of the pipeline. Though the entirety of the survey area was evaluated, Bartoy does note that visibility in areas of active agriculture was poor. As a result of that survey effort, no new cultural resources were identified. The study boundaries for *Archaeological Survey of J-Line, K-Line, F-Line and Import Area for PVWMA, Monterey County (letter report)* overlap with approximately 15% of the current Project area.

Previously Recorded Cultural Resources

The records search revealed that one previously recorded cultural resource, P-44-000047, is located within 0.25 mile (402 meters) of the Project area and no previously recorded cultural resources are located within the Project area (Appendix B).

P-44-000047

Originally recorded in 1956 by A.B. Elsasser, prehistoric site P-44-000047 consists of a small camp site approximately 200 square feet in area located 4 miles northwest of Watsonville on Hirsch and Jackson Ranch, west of Harkins Slough. At the time of recordation, it was noted that the site had been partially destroyed due to intensive cultivation and erosion, stating that the center of the site had been washed out. Pestles and a mortar are listed as the only artifacts and two burials were reported. Of the two burials, the site record notes that one was recovered and its position unknown.

Survey

The Project area is situated primarily within active agricultural land. The proposed pipeline expansions will extend through existing unpaved farm roads and agricultural fields as well as portions of paved roads. Surface visibility within the Project area was highly variable and ranged from fair (25% to 50%) in areas of current agricultural use to excellent (75% to 100%) in areas where agriculture had been cleared and in unpaved farm roads. Disturbances consisted of road maintenance and active agricultural activities. Soils within the Project area consisted of brown to dark brown sandy loam. No cultural resources were located during the survey.

SUMMARY AND RECOMMENDATIONS

The records search was conducted by staff at the NWIC on June 10, 2019, and revealed that no previously recorded cultural resources are within or adjacent to the Project area. SWCA conducted an intensive pedestrian survey of the Project area on July 2 and 3, 2019. No cultural resources were identified as a result of the field survey. The NAHC Sacred Land File search response stated the results were “positive,” but provided no further information regarding the nature or reasoning. Follow-up letters and phone outreach to identified tribal representatives did not result in any responses, and no further information was garnered from the effort.

While it is clear from prior studies the general Project vicinity is sensitive for the presence of known and undocumented prehistoric archaeological resources, the lack of identified resources in the Project area as

a result of this and prior studies indicate diminished sensitivity for encountering obscured and/or buried resources during Project implementation. The majority of the Project area was previously subject to cultural resources study, including pedestrian survey, with parallel findings. As such, no further cultural resources study is recommended for the Project.

Although unlikely, buried or obscured archaeological resources may be encountered during construction. In the event that archaeological resources are inadvertently discovered during construction, work in the immediate vicinity of the find (within 25 feet [7.6 meters]) must stop until a qualified archaeologist can evaluate the significance of the find. Construction activities may continue in other areas beyond the 25-foot stop work area. A qualified archaeologist is defined as someone who meets the Secretary of the Interior's Professional Qualifications Standards in archaeology. If the discovery proves significant under the CEQA, additional mitigation may be warranted.

The discovery of human remains is always a possibility during ground disturbances; State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to California PRC Section 5097.98. The County Coroner must be notified of the find immediately, and all work shall cease in the immediate vicinity of the find. If the human remains are determined to be ancient or likely Native American, the coroner will notify the NAHC, which will designate and notify a Native American MLD. The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burials.

REFERENCES CITED

Bartoy, Kevin M.

2005 *Archaeological Survey of J-Line, K-Line, F-Line, and Import Area for PVWMA, Monterey County (letter report)*. On file with Northwest Information Center, Sonoma State University, Rohnert Park, California.

Chavez, David

1977 Cultural Resources Evaluation of Properties for City of Watsonville, Proposed Industrial Washwater Disposal Program – Phase I, Watsonville, Santa Cruz County, California. On file with the Northwest Information Center, Sonoma State University, Rohnert Park, California.

Holson, John

2004 *Supplemental Pajaro Coastal Distribution Survey (letter report).* On file with Northwest Information Center, Sonoma State University, Rohnert Park, California.

Unknown

1977 *Santa Cruz Regional Wastewater Treatment System Project, Santa Cruz County, California.* On file with Northwest Information Center, Sonoma State University, Rohnert Park, California.

U.S. Geological Survey (USGS)

1980 Watsonville West, California 7.5-minute topographic quadrangle map. Available at: http://historicalmaps.arcgis.com/usgs/. Accessed July 2019.

APPENDIX A

Native American Coordination Documentation

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION
915 Capitol Mall, RM 364
Sacramento, CA 95814
(916) 653-4082
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search (May 22, 2019)

Project: PV Water Coastal Distribution System Pipeline Expansion Project
(SWCA Project No. 53405)

County: Santa Cruz

USGS Quadrangle(s) Name(s): Watsonville West

T 12S, R 01E, S [11,14] Mt. Diablo Meridian.

Company/Firm/Agency: SWCA Environmental Consultants

Contact Person: Leroy Laurie

Street Address: 1422 Monterey Street, C-200

City: San Luis Obispo Zip: 93401

Phone: 805.440.8712

Fax: 805.543.2367_Email: llaurie@swca.com

Project Description:

PV Water proposes to expand their Coastal Distribution System (CDS) pipelines (F to turnout number 60, F1 and/or F1 alternative to turnout number 65) using Proposition 84 Drought Emergency Grant funding provided by the Department of Water Resources. Because the CDS expansion was only partially discussed in the 2014 EIR as an alternative water supply facility, it now must be evaluated under CEQA.

STATE OF CALIFORNIA **Gavin Newsom, Governor**
NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

June 7, 2019

Leroy Laurie
SWCA Environmental Consultants

VIA Email to: llaurie@swca.com
Cc: yanapvoic97@gmail.com

RE: **PV Water Coastal Distribution System Pipeline Expansion (SWCA Project No. 53405) Project**, City of Watsonville; Watsonville West USGS Quadrangle, Santa Cruz County

Dear Mr. Laurie:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were **positive**. Please contact the **Costanoan Ohlone Rumsen-Mutsen Tribe at (831) 728-8471** for more information. Please note the tribe has been cc'd on this letter.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton

Gayle Totton, B.S., M.A., Ph. D
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Santa Cruz County
6/7/2019

Amah MutsunTribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt, CA, 95632
Phone: (916) 743 - 5833
vlopez@amahmutsun.org

Costanoan
Northern Valley
Yokut

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road
Woodside, CA, 94062
Phone: (650) 851 - 7489
Fax: (650) 332-1526
amahmutsuntribal@gmail.com

Costanoan

Costanoan Ohlone Rumsen-Mutsun Tribe
Patrick Orozco, Chairman
644 Peartree Drive
Watsonville, CA, 95076
Phone: (831) 728 - 8471
yanapvoic97@gmail.com

Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA, 95024
Phone: (831) 637 - 4238
ams@indiancanyon.org

Costanoan

Muwekma Ohlone Indian Tribe of the SF Bay Area
Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232
Castro Valley, CA, 94546
Phone: (408) 464 - 2892
cnijmeh@muwekma.org

Costanoan

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed PV Water Coastal Distribution System Pipeline Expansion Project, Santa Cruz County.

SWCA®
ENVIRONMENTAL CONSULTANTS
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San Luis Obispo Office
1422 Monterey Street, Suite C200
San Luis Obispo, CA 93401
Tel 805.543.7095 Fax 805.543.2367
www.swca.com

July 12, 2019

Amah MutsunTribal Band
Valentin Lopez, Chairperson
P.O. Box 5272
Galt, CA 95632

RE: Pajaro Valley Water Management Agency Coastal Distribution System Expansion Planning Support, Monterey and Santa Cruz Counties, California / SWCA Project No. 53405

Dear Valentin Lopez, Chairperson:

The existing Coastal Distribution System (CDS) provides a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz Counties. The proposed F-Line, F1-Line, F6-Line, F7-Line, and F8-Line pipelines will branch off the existing CDS to provide reclaimed water for agricultural irrigation to an agricultural area along San Andreas Road in Santa Cruz County that currently is on a groundwater supply severely impacted by seawater intrusion. The F Pipeline will branch off the existing CDS to provide a supplemental supply for agricultural irrigation. As currently proposed, the Project includes the following modifications as compared to the originally approved CDS:

- An additional 3.0 miles of pipeline to be included in the CDS.
- Trench excavations would be slightly wider (6.5 feet versus 4 feet wide)

The Pipeline will be constructed using traditional open-cut construction methods. The minimum depth of pipeline cover is anticipated to be 5 feet for agricultural lands and 4 feet for all other areas. The maximum depth of pipeline cover is not anticipated to exceed 10 feet. Trench excavations for the Pipeline would be approximately 3 to 6.5 feet in width for the majority of the trench segments. Above ground improvements would include agricultural turnouts, flow isolation valves, air release valve enclosures, and blow-off structures.

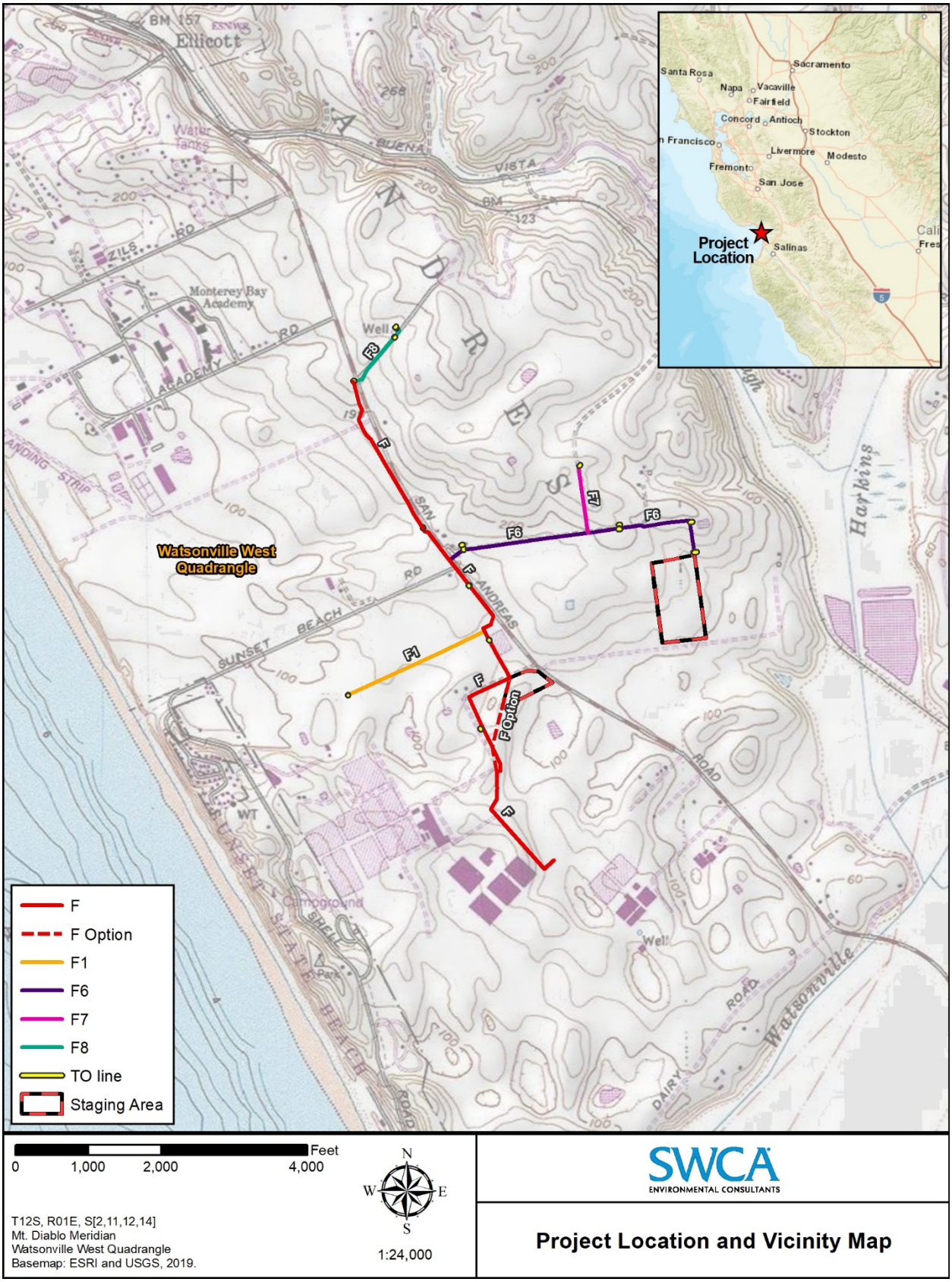
SWCA Environmental Consultants (SWCA) reviewed cultural resource records from the Northwest Information Center at Sonoma State University, which revealed that there are no known resources within the project area. One previously identified prehistoric resource is within within 0.25-mile of the project area and several are situated further to the south-southeast along adjacent to the Harkins Slough. SWCA conducted an intensive pedestrian survey of the project area on July 2 and 3, 2019. The records search and field survey did not identify archaeological resources within the project area. As part of our identification effort, SWCA is requesting any information you may have regarding properties, features, or materials within the project areas that may be of concern to local Native Americans.

Attached to this request is a map depicting the project areas within the U.S. Geological *Watsonville West* quadrangle in Township 12S, Range 01E, Sections 2, 11, 12, 14, Mt. Diablo Meridian. Any comments you may have regarding cultural resources in this area would be greatly appreciated. If you have any comments or questions, please feel free to contact me at (805) 543-7095 x6805, or email at llaurie@swca.com. Thank you for your cooperation.

Sincerely

Leroy Laurie
Cultural Resources Team Leader

Attachment: Project Location Map


Watsonville West Quadrangle
Project Location
Santa Rosa
Sacramento
Napa
Vacaville
Fairfield
Concord
Antioch
Stockton
Livermore
Modesto
Fremont
San Jose
Salinas
F
F Option
F1
F6
F7
F8
TO line
Staging Area
0
1,000
2,000
4,000
Feet
N
W
E
S
1:24,000
T12S, R01E, S[2,11,12,14]
Mt. Diablo Meridian
Watsonville West Quadrangle
Basemap: ESRI and USGS, 2019.
SWCA
ENVIRONMENTAL CONSULTANTS
Project Location and Vicinity Map

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ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

San Luis Obispo Office
1422 Monterey Street, Suite C200
San Luis Obispo, CA 93401
Tel 805.543.7095 Fax 805.543.2367
www.swca.com

July 12, 2019

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road
Woodside, CA 94062

RE: Pajaro Valley Water Management Agency Coastal Distribution System Expansion Planning Support, Monterey and Santa Cruz Counties, California / SWCA Project No. 53405

Dear Irenne Zwierlein, Chairperson:

The existing Coastal Distribution System (CDS) provides a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz Counties. The proposed F-Line, F1-Line, F6-Line, F7-Line, and F8-Line pipelines will branch off the existing CDS to provide reclaimed water for agricultural irrigation to an agricultural area along San Andreas Road in Santa Cruz County that currently is on a groundwater supply severely impacted by seawater intrusion. The F Pipeline will branch off the existing CDS to provide a supplemental supply for agricultural irrigation. As currently proposed, the Project includes the following modifications as compared to the originally approved CDS:

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Sincerely

Leroy Laurie
Cultural Resources Team Leader

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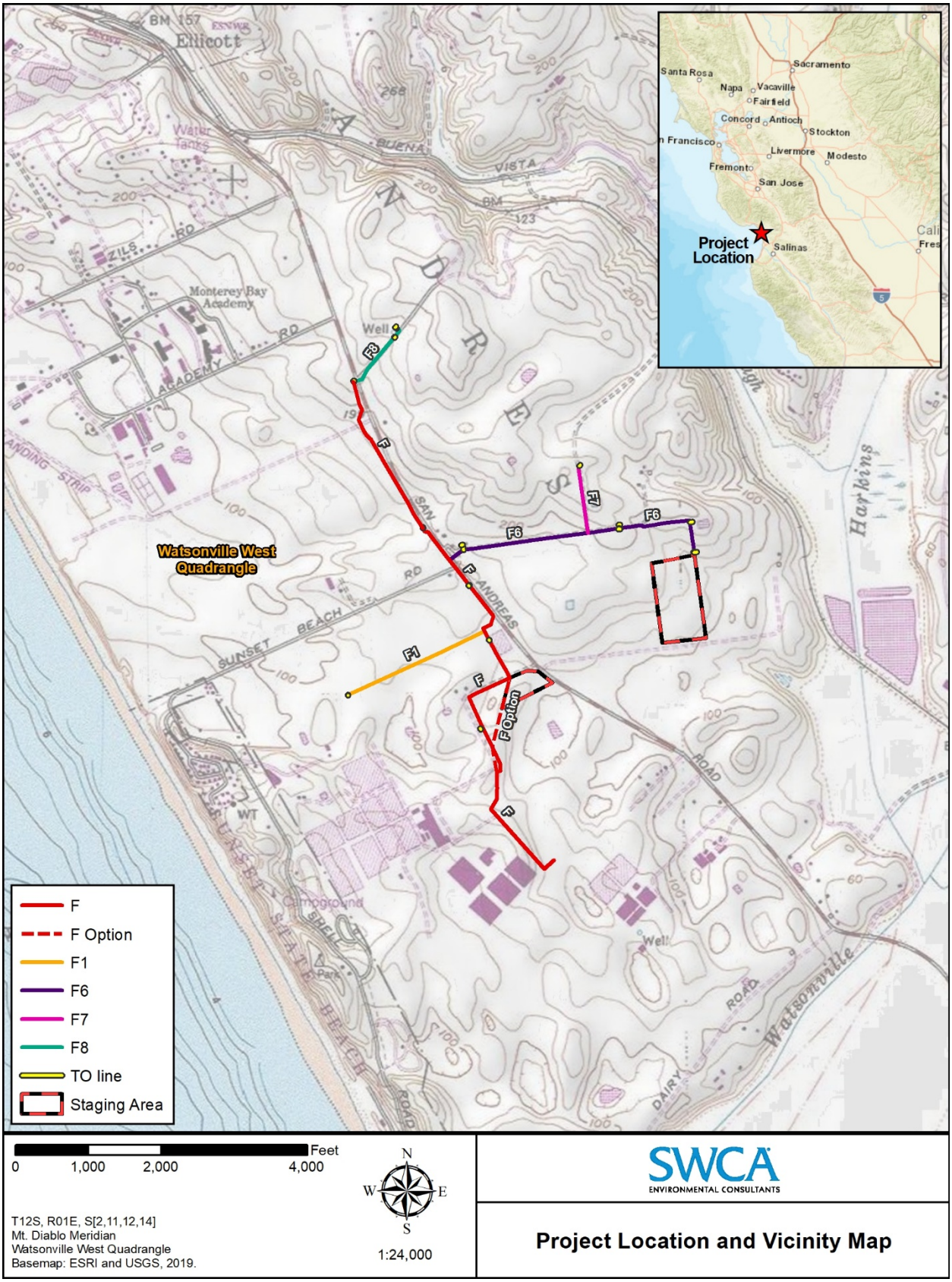
Watsonville West Quadrangle
Project Location
Santa Rosa
Sacramento
Napa
Vacaville
Fairfield
Concord
Antioch
Stockton
Livermore
Modesto
Fremont
San Jose
Salinas
F
F Option
F1
F6
F7
F8
TO line
Staging Area
0
1,000
2,000
4,000
Feet
N
W
E
S
1:24,000
T12S, R01E, S[2,11,12,14]
Mt. Diablo Meridian
Watsonville West Quadrangle
Basemap: ESRI and USGS, 2019.
SWCA
ENVIRONMENTAL CONSULTANTS
Project Location and Vicinity Map

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San Luis Obispo Office
1422 Monterey Street, Suite C200
San Luis Obispo, CA 93401
Tel 805.543.7095 Fax 805.543.2367
www.swca.com

July 12, 2019

Costanoan Ohlone Rumsen- Mutsun Tribe
Patrick Orozco, Chairman
644 Peartree Drive
Watsonville, CA 95076

RE: Pajaro Valley Water Management Agency Coastal Distribution System Expansion Planning Support, Monterey and Santa Cruz Counties, California / SWCA Project No. 53405

Dear Patrick Orozco, Chairman:

The existing Coastal Distribution System (CDS) provides a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz Counties. The proposed F-Line, F1-Line, F6-Line, F7-Line, and F8-Line pipelines will branch off the existing CDS to provide reclaimed water for agricultural irrigation to an agricultural area along San Andreas Road in Santa Cruz County that currently is on a groundwater supply severely impacted by seawater intrusion. The F Pipeline will branch off the existing CDS to provide a supplemental supply for agricultural irrigation. As currently proposed, the Project includes the following modifications as compared to the originally approved CDS:

- An additional 3.0 miles of pipeline to be included in the CDS.
- Trench excavations would be slightly wider (6.5 feet versus 4 feet wide)

The Pipeline will be constructed using traditional open-cut construction methods. The minimum depth of pipeline cover is anticipated to be 5 feet for agricultural lands and 4 feet for all other areas. The maximum depth of pipeline cover is not anticipated to exceed 10 feet. Trench excavations for the Pipeline would be approximately 3 to 6.5 feet in width for the majority of the trench segments. Above ground improvements would include agricultural turnouts, flow isolation valves, air release valve enclosures, and blow-off structures.

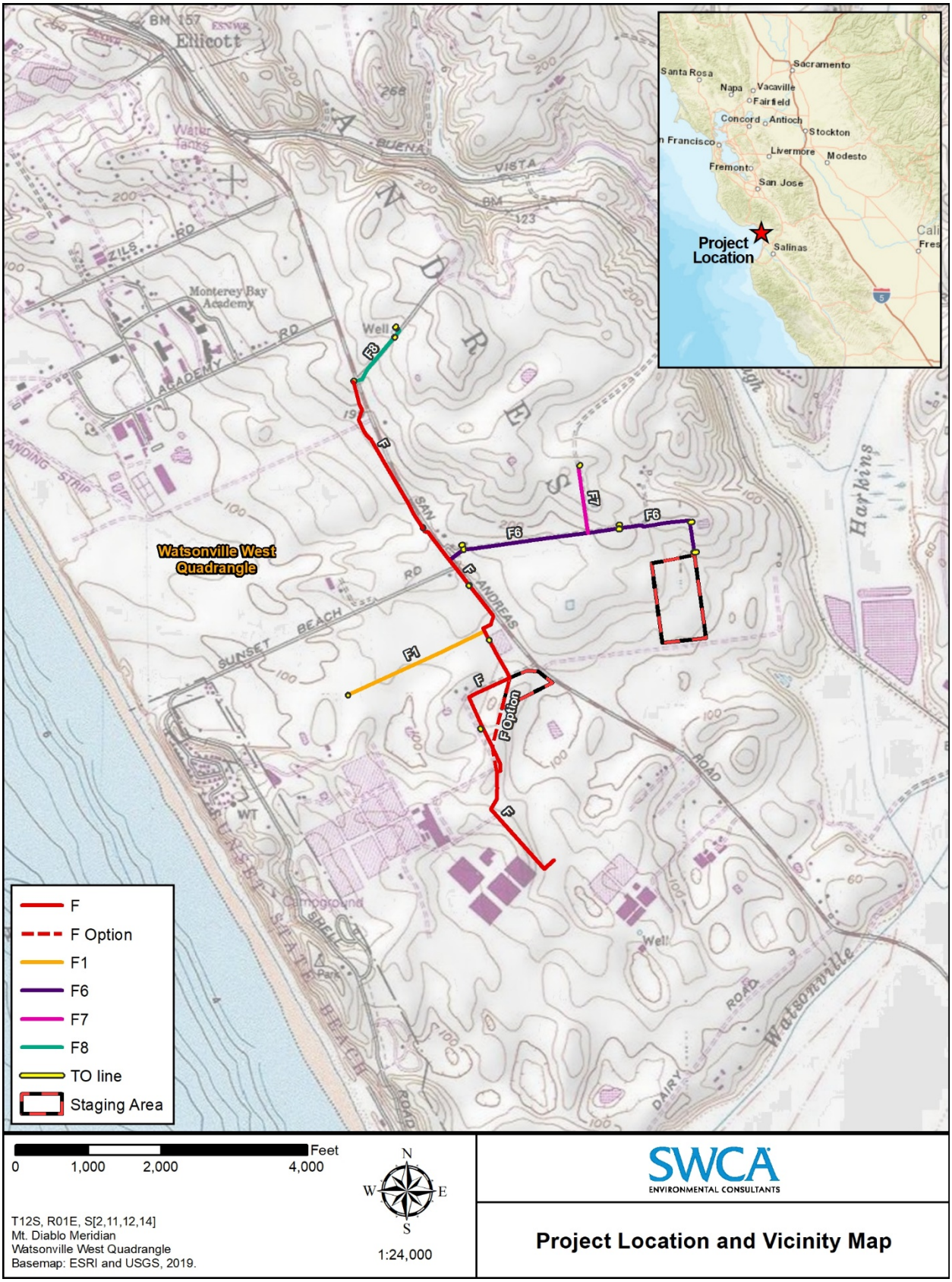
SWCA Environmental Consultants (SWCA) reviewed cultural resource records from the Northwest Information Center at Sonoma State University, which revealed that there are no known resources within the project area. One previously identified prehistoric resource is within within 0.25-mile of the project area and several are situated further to the south-southeast along adjacent to the Harkins Slough. SWCA conducted an intensive pedestrian survey of the project area on July 2 and 3, 2019. The records search and field survey did not identify archaeological resources within the project area. As part of our identification effort, SWCA is requesting any information you may have regarding properties, features, or materials within the project areas that may be of concern to local Native Americans.

Attached to this request is a map depicting the project areas within the U.S. Geological *Watsonville West* quadrangle in Township 12S, Range 01E, Sections 2, 11, 12, 14, Mt. Diablo Meridian. Any comments you may have regarding cultural resources in this area would be greatly appreciated. If you have any comments or questions, please feel free to contact me at (805) 543-7095 x6805, or email at llaurie@swca.com. Thank you for your cooperation.

Sincerely

Leroy Laurie
Cultural Resources Team Leader

Attachment: Project Location Map


Watsonville West Quadrangle
Project Location
Santa Rosa
Sacramento
Napa
Vacaville
Fairfield
Concord
Antioch
Stockton
Livermore
Modesto
Fremont
San Jose
Salinas
F
F Option
F1
F6
F7
F8
TO line
Staging Area
0
1,000
2,000
4,000
Feet
N
W
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July 12, 2019

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
PO Box 28
Hollister, CA 95024

RE: Pajaro Valley Water Management Agency Coastal Distribution System Expansion Planning Support, Monterey and Santa Cruz Counties, California / SWCA Project No. 53405

Dear Ann Marie Sayers, Chairperson:

The existing Coastal Distribution System (CDS) provides a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz Counties. The proposed F-Line, F1-Line, F6-Line, F7-Line, and F8-Line pipelines will branch off the existing CDS to provide reclaimed water for agricultural irrigation to an agricultural area along San Andreas Road in Santa Cruz County that currently is on a groundwater supply severely impacted by seawater intrusion. The F Pipeline will branch off the existing CDS to provide a supplemental supply for agricultural irrigation. As currently proposed, the Project includes the following modifications as compared to the originally approved CDS:

- An additional 3.0 miles of pipeline to be included in the CDS.
- Trench excavations would be slightly wider (6.5 feet versus 4 feet wide)

The Pipeline will be constructed using traditional open-cut construction methods. The minimum depth of pipeline cover is anticipated to be 5 feet for agricultural lands and 4 feet for all other areas. The maximum depth of pipeline cover is not anticipated to exceed 10 feet. Trench excavations for the Pipeline would be approximately 3 to 6.5 feet in width for the majority of the trench segments. Above ground improvements would include agricultural turnouts, flow isolation valves, air release valve enclosures, and blow-off structures.

SWCA Environmental Consultants (SWCA) reviewed cultural resource records from the Northwest Information Center at Sonoma State University, which revealed that there are no known resources within the project area. One previously identified prehistoric resource is within within 0.25-mile of the project area and several are situated further to the south-southeast along adjacent to the Harkins Slough. SWCA conducted an intensive pedestrian survey of the project area on July 2 and 3, 2019. The records search and field survey did not identify archaeological resources within the project area. As part of our identification effort, SWCA is requesting any information you may have regarding properties, features, or materials within the project areas that may be of concern to local Native Americans.

Attached to this request is a map depicting the project areas within the U.S. Geological *Watsonville West* quadrangle in Township 12S, Range 01E, Sections 2, 11, 12, 14, Mt. Diablo Meridian. Any comments you may have regarding cultural resources in this area would be greatly appreciated. If you have any comments or questions, please feel free to contact me at (805) 543-7095 x6805, or email at llaurie@swca.com. Thank you for your cooperation.

Sincerely

Leroy Laurie
Cultural Resources Team Leader

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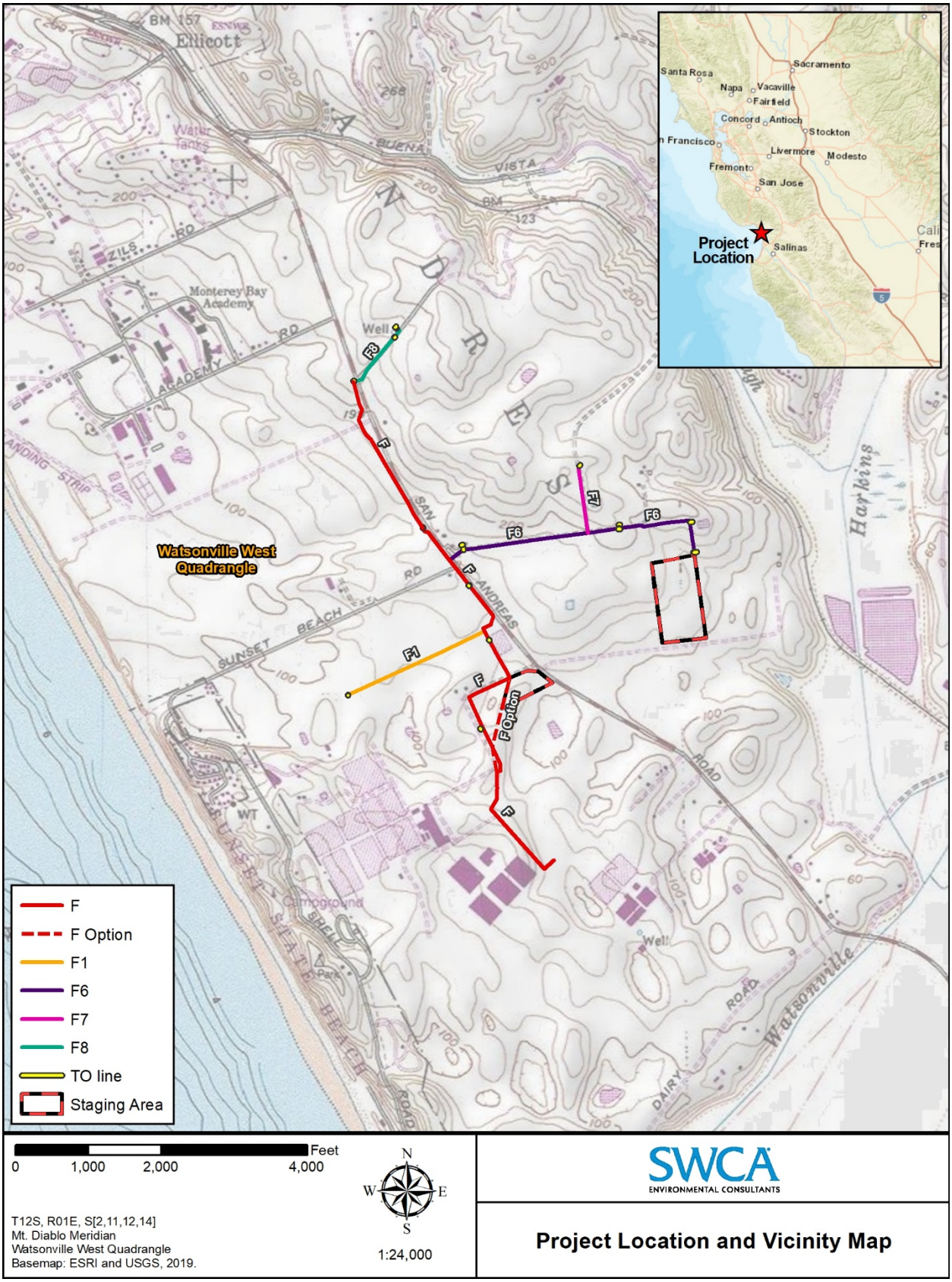
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F
F Option
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F8
TO line
Staging Area
0
1,000
2,000
4,000
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July 12, 2019

Muwekma Ohlone Indian Tribe of the SF Bay Area
Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232
Castro Valley, CA 94546

RE: Pajaro Valley Water Management Agency Coastal Distribution System Expansion Planning Support, Monterey and Santa Cruz Counties, California / SWCA Project No. 53405

Dear Charlene Nijmeh, Chairperson:

The existing Coastal Distribution System (CDS) provides a supplemental supply of irrigation water to a 5,100-acre service area in Monterey and Santa Cruz Counties. The proposed F-Line, F1-Line, F6-Line, F7-Line, and F8-Line pipelines will branch off the existing CDS to provide reclaimed water for agricultural irrigation to an agricultural area along San Andreas Road in Santa Cruz County that currently is on a groundwater supply severely impacted by seawater intrusion. The F Pipeline will branch off the existing CDS to provide a supplemental supply for agricultural irrigation. As currently proposed, the Project includes the following modifications as compared to the originally approved CDS:

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The Pipeline will be constructed using traditional open-cut construction methods. The minimum depth of pipeline cover is anticipated to be 5 feet for agricultural lands and 4 feet for all other areas. The maximum depth of pipeline cover is not anticipated to exceed 10 feet. Trench excavations for the Pipeline would be approximately 3 to 6.5 feet in width for the majority of the trench segments. Above ground improvements would include agricultural turnouts, flow isolation valves, air release valve enclosures, and blow-off structures.

SWCA Environmental Consultants (SWCA) reviewed cultural resource records from the Northwest Information Center at Sonoma State University, which revealed that there are no known resources within the project area. One previously identified prehistoric resource is within within 0.25-mile of the project area and several are situated further to the south-southeast along adjacent to the Harkins Slough. SWCA conducted an intensive pedestrian survey of the project area on July 2 and 3, 2019. The records search and field survey did not identify archaeological resources within the project area. As part of our identification effort, SWCA is requesting any information you may have regarding properties, features, or materials within the project areas that may be of concern to local Native Americans.

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Leroy Laurie
Cultural Resources Team Leader

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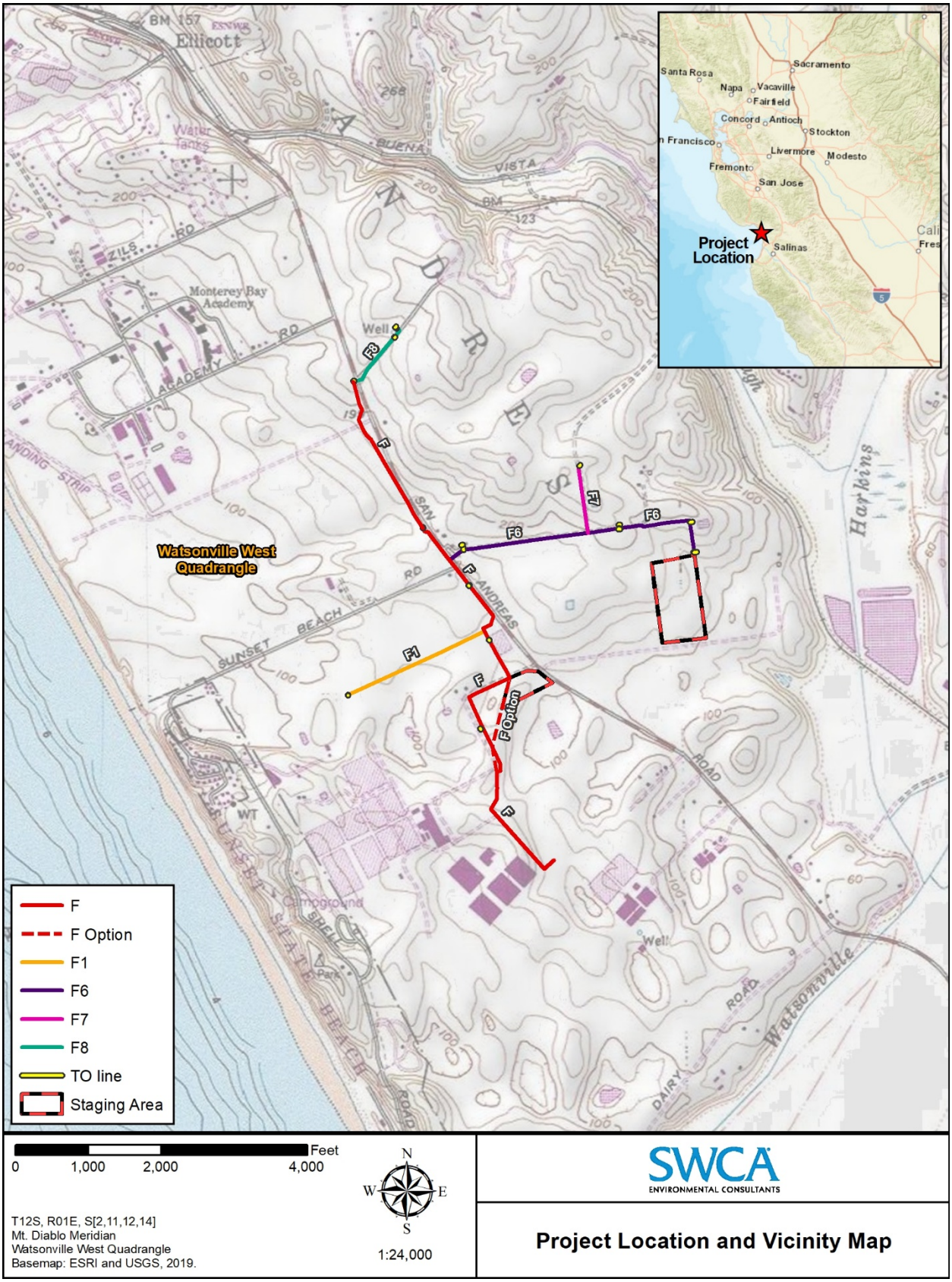
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San Jose
Salinas
F
F Option
F1
F6
F7
F8
TO line
Staging Area
0
1,000
2,000
4,000
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Project Location and Vicinity Map

APPENDIX B

CONFIDENTIAL

Records Search Results

Archaeological and other heritage resources can be damaged or destroyed through uncontrolled public disclosure of information regarding their location. This document contains sensitive information regarding the nature and location of archaeological sites, which should not be disclosed to the general public or unauthorized persons.

Information regarding the location, character, or ownership of a cultural resource is exempt from the Freedom of Information Act pursuant to 54 U.S.C. 307103 (National Historic Preservation Act) and 16 U.S.C. Section 470(h) (Archaeological Resources Protections Act).