STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS
P.O. BOX 2000
SACRAMENTO, CA 95812-2000

INITIAL STUDY

I. BACKGROUND

PROJECT TITLE: Petition to Change Water Right Licenses 11862 and 12206 of Peninsula Open Space Trust

LICENSES: (APPLICATIONS: A25464 and 25465)

PETITIONER: Peninsula Open Space Trust (POST)

PETITIONER'S CONTACT PERSON: Tina Coleman

ADOPTED LAND USE DESIGNATIONS:

General Plan/Local Coastal Plan Designation: "Agriculture" land use

Zoning: "PAD/CD" (Planned Agriculture zoning district with a Coastal Development combining district)

II. PROJECT DESCRIPTION

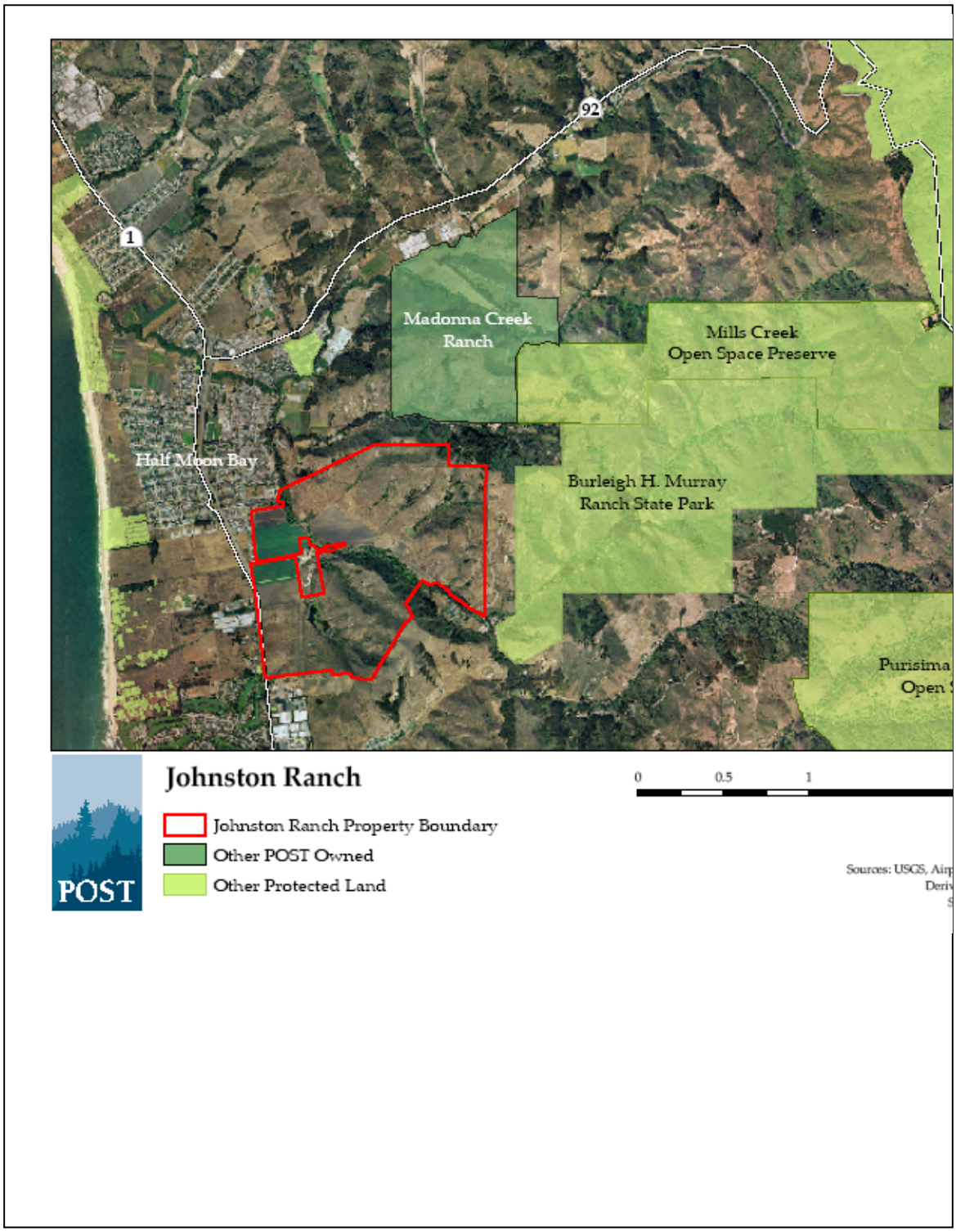
Introduction

The Peninsula Open Space Trust (POST) is a non-profit organization which provides permanent protection and management of open space lands on the San Francisco peninsula. The project is located on the Johnston Ranch, an 862 acre property in San Mateo County situated directly south of the City of Half Moon Bay. This ranch is owned by POST who leases approximately 121 acres to John Guisti for agricultural production of row crops (See Figure 1). The ranch obtains irrigation water under water Licenses 11862 and 12206 from Arroyo Leon, a tributary of Pilarcitos Creek, which flows into the Pacific Ocean (SWRCB 2005).

The ranch historically diverted water from the former Cassinelli Dam and Johnston Ranch Dam located on Arroyo Leon. The diversions were at two on-stream reservoirs formed by small flashboard dams. The dams were abandoned in 1999 in response to concerns of the National Marine Fisheries Service (NMFS) and the Department of Fish and Game (DFG) regarding negative impacts to Steelhead trout (*Oncorhynchus mykiss*) and Coho salmon (*O. kisutch*) (SWRCB 2005). The former diversions have been relocated to a single downstream location. On February 22, 2005 POST filed a Change Petition with the State Water Resources Control Board (State Water Board) to obtain authorization to divert at the new point of diversion (POD) pursuant to the licenses (SWRCB 2005). The change of POD is also subject to an approved Streambed Alteration Agreement with the DFG.

Figure 1

Location Map for the Johnston Ranch



Background

Water right licenses 11862 and 12206 were issued by the State Water Board in 1986 and 1987, respectively (SWRCB 2005). The licenses authorize diversion at two PODs to off-stream storage in the form of two temporary onstream reservoirs that divert water to three onstream reservoirs that serve as points of diversion, rediversion, and storage. The temporary reservoirs were formed by installation of flashboards each December in two separate flashboard dams. The flashboards were removed each spring. License 11862 authorizes the collection to storage of 22.2 acre feet per annum (afa) from December 1 of each year to April 30 of the succeeding year. The rate of diversion to offstream storage is 1 cubic foot per second (cfs). License 12206 authorizes collection and storage of 49 afa. The diversion season and rate of diversion to offstream storage are the same as for License 11862. The licenses are used for irrigation of a shared 310 acre place of use, fire protection and stockwatering.

Both diversions are additionally restricted from diverting water when:

a) During the diversion season stream flow at the USGS gage on Pilarcitos Creek located 0.1 mile downstream from State Highway 1 is between 10 and 20 cfs; and
b) During the period March 15 to April 30 when streamflow at the aforementioned USGS gage on Pilarcitos Creek is at or below 5 cfs.

Water captured in the two onstream reservoirs was subsequently pumped to three reservoirs located on tributaries of Arroyo Leon. These reservoirs are: a) the 9.2 acre foot (af) capacity Johnston House reservoir (aka Reservoir E), b) the 13.0 af capacity Upper Yoshikowa reservoir (aka Reservoir G) and c) the 49.0 af capacity Lower Yoshikowa reservoir (aka Reservoir F). License 11862 includes Reservoir 'E' and 'G', while license 12206 includes Reservoir 'F'.

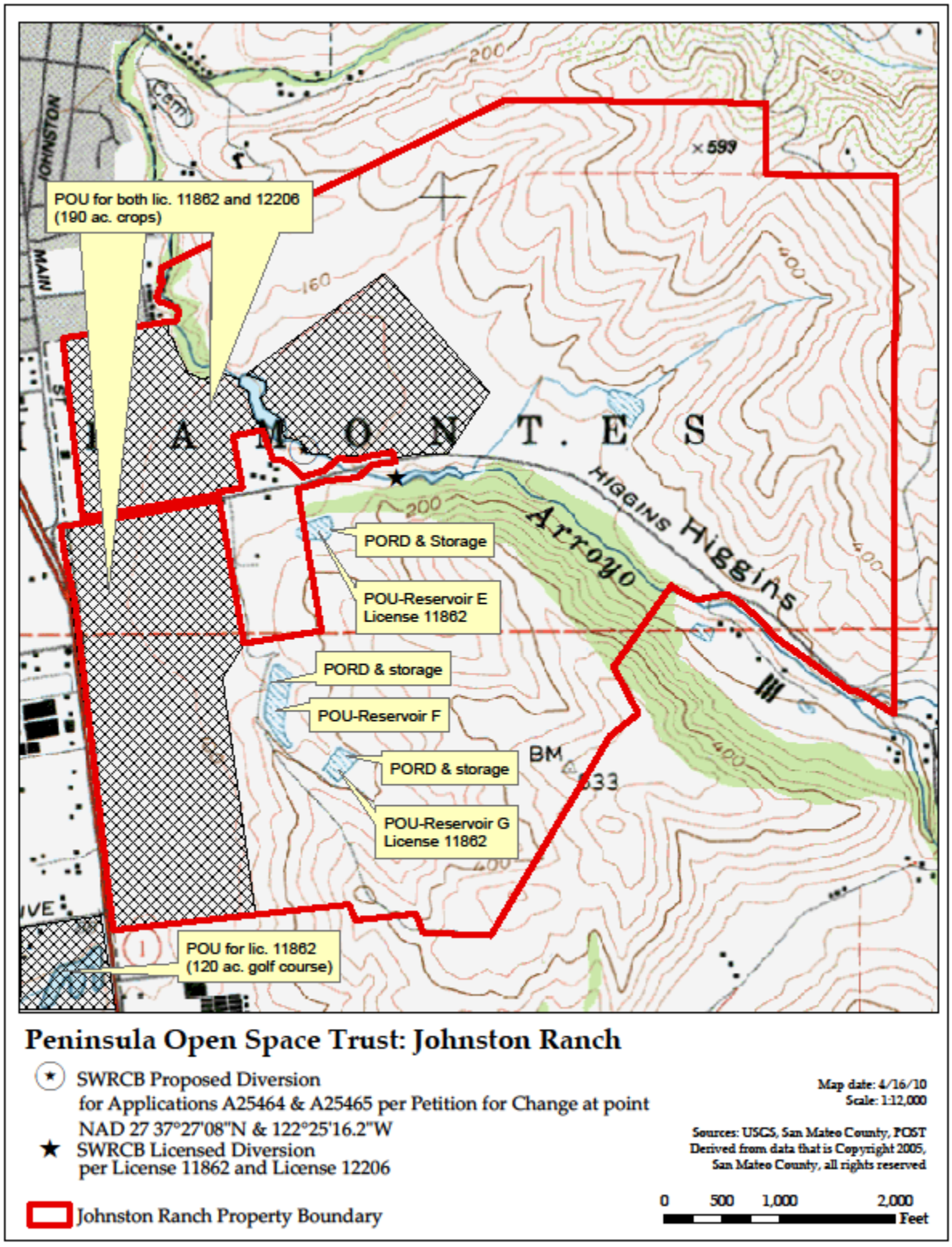
In the mid-1990's, Federal and State resource agencies expressed concern that the onstream dams created a barrier to anadromous fish migration. To address this concern, the Licensee abandoned the two onstream diversions authorized by the licenses and in 1999 constructed an intake facility at a single new POD to offstream storage by direct diversion on Arroyo Leon (SWRCB 2005). The petitioner removed all intake facilities from the onstream POD and, as a result, 60% of the cultivated land was taken out of crop production. To regain this acreage for irrigated cropland, the petitioner continues to seek approval for diversion at the proposed POD. The Change Petitions were filed to obtain authorization to use the new diversion and to remove the two PODs to tributary onstream storage. No changes were made to the three tributary onstream storage reservoirs. POST acquired a portion of the Johnston Ranch in 1999.

Baseline Conditions

Baseline conditions for this project are the existing conditions on February 22, 2005, the date the Petitions for Change were filed (SWRCB 2005). At that time, diversion was occurring from one onstream facility which is the proposed POD shown on Figure 2. At the new diversion facility, the maximum rate of diversion to offstream storage for both licenses combined is 1 cfs. Although the flashboards are no longer used at the two abandoned onstream dams, the concrete portions of the two flashboard dams remain in place and will not be removed as part of the current petitions. In 2005, DFG had not yet issued its design and operating criteria for the diversion facility and the bypass structure. Modification of the facility to meet the DFG design and operating criteria is not considered part of the baseline.

Figure 2

Site Map of the Johnston Ranch and Location of the Former and Proposed POD



Measures to Mitigate Impacts

The project incorporates environmental mitigations to address biological and hydrologic impacts of installing new diversion facilities at the proposed POD location as compared to the baseline situation. These mitigation measures are:

- Mitigation Measure 1: To minimize erosion of the slope and siltation of the stream to insignificant levels, the Petitioner (POST and the ranch operator) shall implement an erosion control plan each time human access to the slope occurs for the installation and maintenance of diversion facilities to ensure that silt and debris will not be discharged into waters of the State. The plan shall include those elements specified in the "Geology and Soils" section of this Initial Study.

- Mitigation Measure 2.a: To avoid premature reduction of stream flows or dewatering of the Arroyo Leon, under all basis of right, the Petitioner shall, during the period December 15 through March 31, bypass a minimum of 4.2 cfs, which is the February median flow. The total stream flow shall be bypassed whenever it is less than 4.2 cfs. Water shall not be diverted beyond a maximum rate of 1.0 cfs, which is 15% of the estimated 20% winter exceedance flow.

- Mitigation Measure 2.b: To avoid premature of stream flows or dewatering of the Arroyo Leon, the Petitioner shall, within three months of the issuance of this license, submit a Compliance Plan for approval by the Deputy Director for Water Rights that will demonstrate compliance with the flow bypass terms specified in this license. The Compliance Plan shall include the elements specified in the "Hydrology and Water Quality" section of the Initial Study.

- Mitigation Measure 2.c: To ensure that water is being diverted only during adequate stream flows of 4.2 cfs or above, the Petitioner shall install staff gages or other measuring devices upstream of the POD, satisfactory to the Deputy Director for Water Rights, for the purpose of determining water levels in Arroyo Leon. The measuring devices must be maintained in operating condition as long as water is being diverted or used under this license. The Petitioner shall record the water surface elevation readings on the last day of each month. The Petitioner shall maintain a record of all water surface elevation readings and shall submit these records with annual progress reports, and whenever requested by the Division.

- Mitigation Measure 3: To prevent the entrainment of aquatic species in the diversion pipe and their eventual death, the Petitioner shall permanently attach a screen to the intake opening of the diversion pipe that meets DFG specifications. This screen will be maintained and monitored on a monthly basis.

Mitigation measures are based on consultation with DFG. More detailed descriptions of these mitigation measures are provided in the relevant sections of this document.

The facilities at the new POD consist of two PVC diversion pipes and a pump house. The pump house is located a few feet from the top of the ravine slope in the riparian corridor. The diversion pipes project from the pump house and traverse the steep ravine slope approximately 40 feet down to the stream bed. Installation and maintenance of these pipes will be done with hand labor. A water pipe leaves the opposite side of the pump house to convey water to the off-stream

reservoirs. There are no other facilities at the new POD. Table 1 compares the proposed POD facilities with the baseline condition.

Table 1: Comparison of Proposed POD Facilities with the Baseline Condition

	Proposed POD Facilities	Baseline Condition (On February 22, 2005)
Intake Pipe	New 4" diameter flexible pipe	4" diameter rigid steel pipe
Water Supply for Cleaning Chamber	New 2" diameter pipe	None
Self-Cleaning Chamber	Yardney self cleaning screen with #10 mesh (3/32")	None
Centrifugal Pump	30 HP pump with flow meter installed above stream channel	30 HP pump installed above stream channel
By-pass flow device	Manually operated rail system to raise and lower intake pipe	None

The existing facilities are proposed to be upgraded to include two new pipes—a 4 inch diameter intake pipe and a 2 inch diameter water supply line for the self-cleaning screen chamber. The 4 inch pipe provides irrigation water to the ranch as well as providing water to the 2 inch line. Both water pipes will be equipped with a self-cleaning screen at the instream end of the pipes that complies with DFG requirements (DFG 2005). In addition, a centrifugal pump, which contains a flow meter, will be mounted above the stream and will provide the pipe suction to divert stream water into the 4 inch pipe.

The pumping system is a 4 inch diameter inlet pipe that is mounted horizontally in the streambed, high enough from the bottom to allow for bypass to flow below the intake before entering the inlet pipe. The pump would be capable of pumping a maximum of 0.9 cfs and would have a throttling valve to decrease output as the situation dictates. A rail system will be constructed to allow the intake pipe to be lowered to the elevation that equates with the minimum bypass flow. The Petitioner will bypass flow when the stream reaches its February median flow (i.e. minimum bypass flow) each winter. The February median flow has been determined by DFG to be 4.2 cfs.

III. ENVIRONMENTAL SETTING

The project is located in the coastal portion of an unincorporated area of San Mateo County but directly south of and, in part, adjoining the City of Half Moon Bay. Land in this area of the county is primarily rural land dominated by agricultural production and open space uses. The project property adjoins the inland side of California's Highway 1 and is bisected by Higgins Purisima

Road (Figure 1). The subject property and surrounding land are located on a flat or gently sloping marine terrace that rises to the foothills of the Santa Cruz Mountains. The Johnston Ranch is an 862 acre property that includes nearly level and gently sloped marine terrace land leased to local grower, John Guisti. The more sloping land, consisting of meadows and forested foothills, is maintained in open space or used for cattle grazing by another lease holder (Figure 2). A typical view of the ranch is shown in Figure 3 below.

The 164 acres leased to Mr. Guisti include a dwelling, barn and packing shed clustered together adjacent to Higgins Purisima Road. The remainder of the leased area is in row crop cultivation or open space. The agricultural goal within the lease area is to maintain 130 acres in row crops; thereby allowing a rotated 34 acres to remain fallow in any year. Most of the row crop land is planted in Brussels sprouts. The grower intends to cultivate 100 acres in Brussels sprouts and 30 acres in other row crops.

Figure 3

View of the Johnston Ranch looking west towards Highway 1. Higgins Purisima Road, which bisects the property, is visible.

The places of use (POU) are three onstream reservoirs located on unnamed tributaries of Arroyo Leon. The “Johnston House” reservoir (aka Reservoir ‘E’) is located about 100 yards south of Higgins Purisima Road, and has a capacity of 9.2 af. The two “Yoshikawa” reservoirs (aka Reservoirs ‘F’ and ‘G’) are located approximately 500 yards south from Higgins Purisima Road, and have capacities of 49 and 13 af, respectively. A 1.1 af stock pond is also located north of Higgins Purisima Road outside of the lease area that covered by water right license 12737 (A025463) and is used for stockwatering and fire protection.

Arroyo Leon is an intermittent stream tributary to Pilarcitos Creek, which flows into the Pacific Ocean. Arroyo Leon bisects the Johnston Ranch for a distance of 7,200 feet. It lies within a deeply incised riparian corridor. The corridor supports a mixed riparian forest dominated by willows and alders. A typical reach of this stream is shown in Figure 4.

Figure 4

View of the Arroyo Leon near the new POD location, February 2, 2006

IV. RESPONSIBLE AND TRUSTEE AGENCIES

The State Water Board is the lead agency under CEQA with the primary authority for project approval.

The NMFS, U. S. Fish and Wildlife Service (USFWS) and the DFG are the three trustee agencies for this project, because they have jurisdiction over natural resources that may be affected by the project. The NMFS administers the federal Endangered Species Act (ESA) for marine and anadromous species. The USFWS administers the ESA for all other federally protected species. Arroyo Leon is known to support two species listed under the ESA–steelhead trout (*O. mykiss*) and the California red-legged frog (*Rana aurora draytonii*). In addition, the riparian corridor has a high potential for supporting the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*). This species is listed as an endangered species under both the ESA and the California ESA.

The DFG administers both the California ESA and the State Fish and Game Code. The latter law includes regulations to protect riparian and wetland resources when alterations to streams and wetlands are proposed, including water diversions. The Fish and Game Code requires a Streambed Alteration Agreement for stream diversions, including this project. As such, the DFG is also a responsible agency for the project.

There are no other land use approvals needed from other State, regional or local agencies for this project.

V. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The environmental factors checked below could be potentially affected by this project. See the checklist on the following pages for more details.

X	Geological Problems /Soils	☐	Agriculture Resources	☐	Public Services
☐	Air Quality	☐	Noise	☐	Utilities and Service Systems
☐	Greenhouse Gases/Global Warming	☐	Land Use and Planning	☐	Aesthetics
X	Hydrology/Water Quality	☐	Energy and Mineral Resources	☐	Cultural Resources
X	Biological Resources	☐	Hazards	☐	Recreation
		☐	Population and Housing	**X**	Mandatory Findings of Significance
		☐	Transportation/Circulation		

The Initial Study Checklist on the following pages denotes negative environmental impacts and potentially negative environmental impacts that would occur from changing the POD from the two former locations on the Arroyo Leon to the proposed location farther downstream on Arroyo Leon. All such impacts are discussed in detail in the “Discussion” subsections in each topical area of the checklist. Beneficial and potentially beneficial impacts from relocating the POD are also discussed in the “Discussion” subsections. However, beneficial impacts are not identified with an “X” in the checklist.

1. **GEOLOGY and SOILS.** Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	X
i) Rupture of a known earthquake fault, as delineated in 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 & Geology Special Publication 42.	☐	☐	☐	X
ii) Strong seismic ground shaking?	☐	☐	X	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	X	☐
iv) Landslides?	☐	☐	X	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	X	☐	☐
c) 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?	☐	☐	☐	X
d) Be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	X
e) Have soils incapable of adequately supporting the use of septic tanks or alternate wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	X

Discussion

The project is not located within a seismic fault zone. However, several earthquake faults occur in coastal California and all improvements in the region have the potential to be affected by seismic events. Project facilities consisting of a pump house at the top of the stream bank and a diversion pipe extending down the stream bank into the stream channel could be affected by seismic events including seismic shaking, liquefaction and landslides. Such effects on project facilities, if they would occur, would not subject humans to danger or injury because they will not

house people nor be located in an area of the Johnston Ranch where people live, work, recreate or otherwise are likely to use. Further, these facilities do not include excavations, construction of a dam or a similar improvement that could result in a hazardous situation if a seismic induced failure occurred.

The primary soils-related change this project will generate compared to the baseline condition is the construction and maintenance of a new water intake facility on the same steep streambank slope where the previous intake facility was located. This steep bank has a gradient that exceeds 50%, and human activity on the slope associated with installation and maintenance of the pipe is expected to dislodge earthen materials resulting in some erosion.

The potential erosion problem will be limited to times of initial pipe installation and rare occurrences when maintenance activities require access to the slope. However, erosion control measures will need to be included during any installation and maintenance activities where access to the slope is required. Implementation of the mitigation measure below will reduce the potential for erosion and siltation to insignificant levels.

Impact 1: Use of the steep slope by workers to install and occasionally maintain diversion facilities, could dislodge surface materials on the slope causing erosion on the slope (stream bank) and result in siltation of the stream located at the toe of the slope. This is a potentially significant impact.

Mitigation Measure 1: To minimize erosion of the slope and siltation of the stream to insignificant levels, the Petitioner (POST and the ranch operator) shall implement an erosion control plan each time human access to the slope occurs for the installation and maintenance of diversion facilities to ensure that silt and debris will not be discharged into waters of the State. The plan shall include the following elements:

a) Installation of a temporary silt fence at the toe of the slope, but above the area of flowing water, parallel to the stream that traverses a distance that extends at least 20 feet upstream and 20 feet downstream beyond the work area. The silt fence shall be installed so there are no openings at the bottom of the fence. Eroded materials will be captured and stabilized by the fence. This silt fence will be installed prior to any other work occurring on the slope and remain securely in place until all work is completed.
b) Safety ropes shall be used to both stabilize workers and to lower and remove equipment and materials up and down the slope. The safety ropes shall be secured at stable locations above the top of the slope and beyond the riparian habitat associated with the stream. Each worker shall be provided with, at least, one individual safety rope which will be separate from any safety ropes dedicated to equipment and materials.
c) All eroded material captured by the silt fence shall be completely removed from the area using buckets lowered and raised by safety ropes. This material shall be disposed of outside of the stream bank and channel area.
d) Any substantial area where erosion has occurred shall be covered with mulch that is secured with erosion control netting, erosion control blankets or similar material at the termination of all work. Netting, blankets and similar materials will be secured to the slope surface with standard erosion control staples and their use will be limited to those portions of the slope above the 100 year flood elevation.

e) Removal of the temporary silt fence with the aide of safety ropes shall occur as the final action of the plan.
f) All human activities, including all erosion control measures, shall be limited to the dry season of April 15 to October 15 of any year.
g) Maintenance issues that arise outside of the dry season shall require cessation of diversion activities (if occurring) unless the Petitioner is granted an emergency approval from the State Water Board to conduct a repair. In that case, the Petitioner shall follow all erosion control and safety measures stipulated in the emergency approval.

Conclusion

Installation of the project facilities at the new POD creates a potentially significant impact to geology and soils. However, this impact will be reduced to insignificant levels if the erosion control plan discussed in the mitigation measure above is implemented.

2. **AIR QUALITY**. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	X
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	X
d) 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 (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	X
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	X

Discussion

The project will allow crop cultivation to continue on the ranch. This includes disking ground, which generates particulate matter (dust), and use of tractors and other farm equipment, which generate exhaust emissions such as carbon monoxide. However, the project will not cause these activities to increase beyond current levels. There will not be any increase above baseline air quality conditions and therefore no air quality impacts.

Conclusion

The relocation of the POD to the proposed location will not generate any new significant air quality impacts. No mitigation measures are required to address environmental impacts.

HYDROLOGY & WATER QUALITY. Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	X
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (*e.g.*, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	X
c) Substantially alter the existing drainage pattern of the site, including through alteration of the course of a stream or river, or substantially increase the rate or volume of surface runoff in a manner that would:				
i) result in flooding on- or off-site	☐	☐	☐	X
ii) create or contribute runoff water that would exceed the capacity of existing or planned stormwater discharge	☐	☐	☐	X
iii) provide substantial additional sources of polluted runoff	☐	☐	☐	X
iv) result in substantial erosion or siltation on-or off-site?	☐	X	☐	☐
d) Otherwise substantially degrade water quality?	☐	☐	☐	X

e)	Place housing or other structures which would impede or re-direct flood flows within a 100-yr. flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	X
f)	Expose people or structures to a significant risk of loss, injury, or death involving flooding:				
	i) as a result of the failure of a dam or levee?	☐	☐	☐	X
	ii) from inundation by seiche, tsunami, or mudflow?	☐	☐	☐	X
g)	Would the change in the water volume and/or the pattern of seasonal flows in the affected watercourse result in:				
	i) a significant cumulative reduction in the water supply downstream of the diversion?	☐	X	☐	☐
	ii) a significant reduction in water supply, either on an annual or seasonal basis, to senior water right holders downstream of the diversion?	☐	X	☐	☐
	iii) a significant reduction in the available aquatic habitat or riparian habitat for native species of plants and animals?	☐	X	☐	☐
	iv) a significant change in seasonal water temperatures due to changes in the patterns of water flow in the stream?	☐	X	☐	☐
	v) a substantial increase or threat from invasive, non-native plants and wildlife	☐	☐	☐	X
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	X
i)	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	X
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	X

Discussion

There are no proposed changes to the amount of water diverted in this petition. The primary water quality-related change compared to the baseline condition is that sedimentation of the stream may occur during installation and maintenance of intake and diversion facilities on the steep slope at the new POD, negatively affecting water quality. This impact and the associated mitigation measure are discussed in detail in the "Geology and Soils" section above.

Unregulated diversion of streams can result in unnatural and premature reduction of stream flows and dewatering of the stream channel, potentially reducing downstream water volume to less than that required for aquatic organisms and downstream diverters. This situation can be especially problematic when natural streamflow declines in the spring. Arroyo Leon is an intermittent stream where stream flows naturally diminish in the spring and cease during the summer months. Aquatic organisms that may be affected include freshwater and anadromous fish (e.g. salmon and steelhead), insects (e.g. dragonflies, caddis flies), and amphibians (e.g. red-legged frogs) whose larval stages depend on an aquatic environment. Biotic issues are discussed in more detail in the "Biological Resources" section.

Diversion at the new POD will be conducted according to restrictions specified by the State Water Board to prevent these impacts from occurring. Staff from the DFG have consulted with staff from the State Water Board and the agencies have agreed to require the following restrictions for this project:

1) The period of diversion will occur between December 15 and March 31; and
2) The maximum instantaneous pumping rate shall be limited to 15% of the estimated 20% winter exceedance flow (1.0 cfs).

These restrictions incorporate the instream flow requirements established in the *Draft Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams* (*Draft Guidelines*) (DFG/NMFS 2002).

Impact 2: Unregulated water diversion of Arroyo Leon may result in unnatural and premature reduction of stream flows and dewatering of the stream channel, potentially diminishing water volume below that required to sustain anadromous fish located downstream of the POD and provide adequate water supply to permitted downstream users. This is a significant impact.

Mitigation Measure 2a: To avoid premature reduction of stream flows or dewatering of the Arroyo Leon, under all basis of right, the Petitioner shall reduce the season of diversion to December 15 through March 31 and bypass a minimum of 4.2 cfs, which is the February median flow. Water shall not be diverted beyond a maximum rate of 1.0 cfs, which is 15% of the estimated 20% winter exceedance flow.

Mitigation Measure 2b: To avoid premature reduction of stream flows or dewatering of the Arroyo Leon, the Petitioner shall, within three months of the issuance of this license, submit a Compliance Plan for approval by the Deputy Director for Water Rights that demonstrates compliance with the flow bypass terms specified in this license. The Compliance Plan shall include the following:

a) A description of the physical facilities (i.e. pipes, pumps, etc.) that will be constructed or have been constructed at the project site and will be used to bypass flow.

b) A description of the gages and monitoring devices that will be installed or have been installed to measure stream flow and/or reservoir storage capacity, including any necessary calibration.
c) A time schedule for the installation and rating of these facilities.
d) A description of the frequency of data collection and the methods for recording bypass flows and storage levels.
e) An operation and maintenance plan that will be used to maintain all facilities in good condition.
f) A description of the events that will trigger recalibration of the monitoring devices, and the process that will be used to recalibrate.

The Petitioner shall be responsible for all costs associated with developing the Compliance Plan, and installing and maintaining all flow bypass and monitoring facilities described in the Compliance Plan. The monitoring data shall be maintained by the Petitioner and made available to the Deputy Director for Water Rights, upon request.

Mitigation Measure 2c: To ensure that water is being diverted only during adequate stream flows of 4.2 cfs or above, the Petitioner shall install staff gages or other measuring devices upstream of the POD, satisfactory to the Deputy Director for Water Rights, for the purpose of determining water levels in Arroyo Leon. The measuring devices must be maintained in operating condition as long as water is being diverted or used under this license. The Petitioner shall record the water surface elevation readings on the last day of each month. The Petitioner shall maintain a record of all water surface elevation readings and shall submit these records with annual progress reports, and whenever requested by the Division.

As discussed in the Project Description section above, no deconstruction activities will occur at the former PODs. This will avoid the potential short-term degradation of water quality that can unintentionally occur when structures are being demolished in a stream channel.

Conclusion

Implementation of the three mitigation measures above will prevent significant hydrological impacts at the new POD. These mitigation measures, together with the mitigation measure recommended in the “Geology and Soils” section above, will prevent stream siltation and related water quality problems from occurring. Therefore, the mitigation will improve hydrologic resources relative to the baseline.

3. **BIOLOGICAL RESOURCES.** Would the project:

Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact

a) 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 DFG or USFWS?	☐	X	☐	☐
b) 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 DFG or USFWS?	☐	X	☐	☐
c) Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, *etc.*) through direct removal, filling, hydrological interruption or other means?	☐	X	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites?	☐	X	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	X

Discussion

Overview

There are no proposed changes to the place of use or amount diverted. Proposed changes to the point of diversion will be minimal and mitigation terms are provided to avoid long-term impacts, as discussed in the "Geology and Soils" section of this document. The primary potential biological impact generated by the proposed change is that aquatic organisms may become trapped in the intake pipe. This is a potentially significant impact. This impact will be avoided by installing a screen chamber at the intake that will prevent entrainment of aquatic organisms, discussed in more detail below.

Biological surveys

A previous consultant for POST, EDAW, conducted informal consultation with resource agencies on the potential occurrence of sensitive species in the area (EDAW 2004). Several additional studies and on-site consultations have also been conducted on or near the property,

including a survey of steelhead habitat (Smith 2001, 2002), surveys and communications with consultants regarding red-legged frog habitat (Allaback 2001, McGinnis 2002), a site visit by Hagar Environmental Science (Hagar 2002), a vegetation survey (Sands 2002). Copies of these studies are on file at the State Water Board office in Sacramento, California and at POST located at 222 High Street, Palo Alto, California.

These studies determined that the project area provides potential habitat for five wildlife species protected under the federal ESA. Three federally threatened species, steelhead trout (*O. mykiss*) and coho salmon (*O. kisutch*), and the California red-legged frog (*Rana draytonii*) are known to use Pilarcitos Creek and its tributaries. On-site surveys documented the presence of steelhead trout and California red-legged frog, and the steelhead surveys also documented that habitat conditions were conductive to coho salmon (Hagar 2002). The San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) is listed as an endangered species by both the ESA and California ESA (DPR 2010). The California tiger salamander (*Ambystoma californiense*) is listed as a threatened species by the ESA and is a candidate for endangered species listing by the CESA. Surveys were not conducted for the San Francisco garter snake or the California tiger salamander, but DFG staff and the POST consultant have determined the site is potential habitat for both species (site visit with DFG, February 2, 2006). Therefore, this project is being evaluated under the assumption that these species are present.

California Natural Diversity Database search

A search of the California Natural Diversity Database (CNDDB) was conducted to identify sensitive wildlife and plant species that may potentially inhabit the project site (CNDDB 2010). Tables 2 and 3 at the end of this section list all sensitive animal and plant species that occur in the area of San Mateo County where the Johnston Ranch is located. The CNDDB search included the Half Moon Bay USGS quadrangle where the ranch is located and the 5 quads surrounding the Half Moon Bay quadrangle (San Mateo, Montara Mountain, Woodside, San Gregorio, La Honda). Tables 2-3 identify which of these species have the potential to occur at the project site and justification for why the remaining species are not likely to inhabit the site or be affected by the project (CNPS 2010, NOAA 2010, USFWS 2010). The search identified eight sensitive animal species and five sensitive plant species that may inhabit the project area. These species are discussed below along with previous studies that have confirmed the presence of some of the species.

In addition to the five animal species previously listed, a search of the CNDDB identified four animal Species of Special Concern that have the potential to inhabit the project site due to favorable habitat characteristics (Table 2) (CNDDB 2010). These species include the foothill yellow-legged frog *(Rana boylii), w*estern pond turtle (*Actinemys marmorata),* the San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens)* and the American badger *(Taxidea taxus).* Although none of the 70 plant species identified in the 2002 survey of the project area were state or federally listed species (Sands 2002), the CNDDB search identified five plant Species of Special Concern which occur in habitats similar to that at the project site (Table 3). These species include the Coastal marsh vetch *(Astragalus pycnostachyus* var. *pycnostachyus),* Davidson's bush mallow *(Malacothamnus davidsonii),* western leatherwood *(Dirca occidentalis),* Saline clover (*Trifolium depauperatum* var*. hydrophilum)* and Point Reyes bird's-beak (*Cordylanthus maritimus* ssp*. palustris.).*

Sensitive species

Steelhead and Coho salmon

In the United States, steelhead trout (*Oncorhynchus mykiss*) are found along the entire Pacific Coast. Traditionally, the range of Coho salmon (*Oncorhynchus kisutch*) extended from the Bering Sea in Alaska south to the Monterey Bay. However, the numbers of both species have sharply declined along the Oregon and California coasts in recent years. Steelhead and Coho salmon habitat includes streams, rivers, estuaries and marine habitat. Unobstructed freshwater streams are necessary for the adult migration and spawning. Freshwater habitat is required for the egg and juvenile stages for the species. Eggs are laid in small and medium gravel and need good stream flow to supply oxygen to survive. After emerging from the redd (nest), they remain in freshwater streams for 1−4 years before migrating out to the ocean. They are particularly susceptible to human induced changes in water quality. Sedimentation of streams can ruin spawning beds and smother eggs (NOAA 2010). Steelhead were observed in Arroyo Leon directly above the former POD location in 2001 surveys (Smith 2001, 2002). Steelhead were also observed in this location in 2002 during a site visit by Hagar Environmental Science. Both the steelhead and coho salmon have been observed in Pilarcitos Creek (Hagar 2002). The confluence of Arroyo Leon and Pilarcitos Creek is located about three miles downstream of the proposed POD. Juveniles could be harmed by the intake facility. This potential impact is mitigated by Mitigation Measure 3, described below.

California red-legged frog

The California red-legged frog (*Rana draytonii*) occurs most commonly along California's northern and southern coast ranges and in isolated areas in the foothills of the Sierra Nevada Mountains. Red-legged frogs spend most of their lives in and near sheltered backwaters of freshwater ponds, marshes, springs, streams and reservoirs. Deep pools with overhanging willows and an intermixed fringe of cattails are considered optimal habitat. The species is known to travel long distances over land between water sources during winter rains. Red-legged frogs breed from November through March. The larvae (tadpoles) require a fully aquatic habitat for 3.5 to 7 months before they metamorphose to their adult stage. This species was observed at both the former and proposed PODs during 2001 surveys conducted by Biosearch Wildlife Surveys (Allaback 2001). Juveniles could be harmed by the intake facility. This potential impact is mitigated by Mitigation Measure 3, described below.

Foothill yellow-legged frog

The Foothill yellow-legged frog (*Rana boylii*) has been observed in coastal streams and streams of the Cascades and California's coastal mountains from Oregon to Baja California, Mexico. While this species has not been observed on Arroyo Leon or Pilarcitos Creek, habitat conditions of these two streams are favorable for the species. This species frequents streams and rivers with rocky substrate and open, sunny banks in forests, chaparral, and woodlands. Mating and egg-laying occurs in streams and rivers from April until early July, after streams have slowed from winter runoff. Tadpoles graze the surface of rocks and vegetation consuming algae and detritus. Tadpoles metamorphose after 3 to 4 months, typically from July to October. While this species has not been observed on the Johnston Ranch, habitat conditions make its occurrence possible. Juveniles could be harmed by the intake facility. This potential impact is mitigated by Mitigation Measure 3, described below.

California tiger salamander

The California tiger salamander (*Ambystoma californiense*) is endemic to California and is found in annual grasslands and open woodlands. Like most of their relatives, the adult California tiger salamander is terrestrial. For six to nine months a year, adults inhabit underground burrows in the grassy highlands. During the wet season, these adults migrate to aquatic environments to breed and lay their eggs. Larvae hatch from eggs after about 10-14 days and develop in the pool for the next 2 to 3 months. As juveniles, they eat aquatic insects, invertebrates and tadpoles. The species prefers ponds to flowing streams but may lay eggs in gentle eddies and backwaters of streams. Tiger salamanders have not been observed on the Johnston Ranch. Juveniles could be harmed by the intake facility. This potential impact is mitigated by Mitigation Measure 3, described below.

Western pond turtle

The Western pond turtle (*Actinemys marmorata*) has a disjunct distribution throughout most of the Pacific Northwest and northern and central California. The species occurs in both permanent and intermittent waters, including marshes, streams, rivers, ponds and lakes. They favor habitats with emergent logs or boulders, where they aggregate to bask. Western pond turtles seek refuge in deep water under submerged logs and rock, in beaver burrows and lodges, and by "swimming" into deep silt. They are extremely difficult to detect under these conditions. Females produce 5-13 eggs per clutch and deposit eggs once or twice a year. Western pond turtles may lay their eggs as far as 0.8 km from the nearest source of water, but most nests are within 90 m from water. Some hatchlings overwinter in the nest, and the young first appear in the spring. Individuals grow slowly and adult turtles may live more than 30 years. The species was not observed during surveys conducted on the Arroyo Leon, but this stream and the adjacent area provides suitable habitat for the turtle. Juveniles could be harmed by the intake facility. This potential impact is mitigated by Mitigation Measure 3, described below.

San Francisco garter snake

The range of the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) is limited to small areas entirely within San Mateo County and northern Santa Cruz County. The species has been sighted in the Crystal Springs Wildlife Refuge located 6 miles east of the proposed POD and at Pescadero Marsh Natural Preserve, 14 miles south of the proposed POD. The species has not been observed on the Johnston Ranch. The San Francisco garter snake is a semi-aquatic species. It typically inhabits ponds, marshes, drainage swales and wet meadows with dense vegetative cover. The species may forage and bask in terrestrial habitat but requires aquatic habitat as a refuge from predators and primary source of food (frog tadpoles). Juveniles could be harmed by the intake facility. This potential impact is mitigated by the Mitigation Measure 3, described below.

San Francisco dusky footed woodrat

The range of the San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) extends through the Pacific Coast of California and through the interior valleys of California. Woodrats live in a variety of terrestrial habitats. This species may be arboreal, and its habitat includes chaparral, hardwood, conifer, mixed forests, and riparian woodlands. Nests are generally constructed in inaccessible areas such as thorny thickets, poison oak patches, or nettles. Woodrats are herbivores and eat grasses, leaves, fresh fruits, small bulbs, bark, flowers, and nuts. Although the woodrat has not been observed on the Johnston Ranch, the riparian forest at the proposed POD provides suitable habitat for the species. Since the project will not remove riparian habitat, it is unlikely use of the proposed POD will generate impacts to the species.

American badger

The American badger (*Taxidea taxus*) occurs from northern Alberta southward to central Mexico. In California, badgers ranged throughout the state except for the humid coastal forests of northwestern California in Del Norte and Humboldt Counties. However, badger populations have declined drastically in California within the last century. Agricultural and urban developments have been the primary cause of decline and extirpation of populations. Badgers occupy a diversity of habitats, but grasslands, savannas, and mountain meadows near timberline are preferred. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated ground. Badgers prey primarily on burrowing rodents such as gophers. Uncultivated areas of the Johnston Ranch contain potential badger habitat. The Arroyo Leon riparian forest provides a corridor from open grasslands and mountain meadows on the POST property to similar habitats on neighboring properties. Use of the riparian corridor by badgers is likely to be infrequent because more open environments, like grasslands, are preferred (Williams 2007). Since the project will not remove riparian habitat, it is unlikely that proposed change in POD will generate impacts to the species.

Coastal marsh milk vetch

The known range of Coastal marsh milk vetch *(Astragalus pycnostachyus* var. *pycnostachyus*) is limited to sites in San Mateo, Sonoma and Humboldt Counties. This perennial herb occurs in brackish and freshwater wetlands and riparian habitats at elevations up to 98 feet above Mean Sea Level. The plant forms a thick erect clump of hollow, woolly stems 40 to 90 centimeters tall. According to CalFlora, there have 26 recorded sightings of the plant in San Mateo County (CalFlora 2010). This species was not observed during the Arroyo Leon vegetation survey conducted by Go Native Nursery (Sands 2002), but the riparian forest at the proposed POD provides suitable habitat for this species. Coastal marsh milk vetch is not likely to be impacted by the project because construction and use of the proposed POD will not remove vegetation in the riparian area. Some trampling of vegetation may occur during the initial installation and periodic maintenance of POD facilities. However, implementation of Mitigation Measure 1 discussed under the “Geology and Soils” section will mitigate any potential long-term negative impacts to the habitat.

Davidson's bush mallow

The range of Davidson’s bush mallow (*Malacothamnus davidsonii*) extends along the California coast from Monterey County to San Mateo County and inland to the Santa Clara Valley. This herbaceous plant occurs in a variety of habitats including cismontane forests, chaparral, coastal

scrub and riparian forests. Its blooming period is from June to January. This species was not observed on Arroyo Leon in the vegetation survey conducted by Go Native Nursery (Sands 2002). Potential impacts and mitigation for this species are identical to those of coastal marsh milk vetch (discussed above).

Western leatherwood

The range of Western leatherwood (*Dirca occidentalis*) is limited to the San Francisco Bay region. This herb occurs in a variety of habitats including broadleaf upland forest, coniferous forest, chaparral, cismontane woodland and riparian forest. While the riparian forest area of the POD site provides suitable habitat for the species, it was not observed on Arroyo Leon in the vegetation survey conducted by Go Native Nursery (Sands 2002). Potential impacts and mitigation for this species are identical to those of coastal marsh milk vetch (discussed above).

Saline clover

The range of the Saline clover (*Trifolium depauperatum* var*. hydrophilum)* is contained within the San Francisco Bay and Monterey Bay areas. This herb species is typically found in brackish and freshwater marshes and swamps, but also inhabits valley and foothill grasslands. Its blooming period is April to June. This species was not observed on Arroyo Leon in the vegetation survey conducted by Go Native Nursery (Sands 2002). Potential impacts and mitigation for this species are identical to those of coastal marsh milk vetch (discussed above).

Point Reyes bird's-beak

This herb species ranges from San Mateo County north to Oregon along the coast at elevations up to 10 meters. Its habitat is primarily brackish marshes and swamps, but it can also occur in freshwater wetlands. This species was not observed on Arroyo Leon in the vegetation survey conducted by Go Native Nursery (Sands 2002). Potential impacts and mitigation for this species are identical to those of coastal marsh milk vetch (discussed above).

Riparian Habitat

Arroyo Leon is an important hydrological and biological resource, transporting freshwater for human use and habitat for aquatic species. Chapter 1600, *et seq*. of the California Fish and Game Code provides regulations to protect streams and associated riparian habitat. To ensure the health of these resources, the State Water Board has considered the *Draft Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Streams (Draft Guidelines)* (DFG/NMFS 2002) to protect existing water rights and to balance human consumption with the needs of riparian plants and wildlife.

Arroyo Leon Creek is a riparian corridor vegetated with a mixed hardwood forest dominated by Arroyo willow (*Salix lasiolepis*) and Red alder (*Alnus rubra*) with an understory of California blackberry (*Rubus ursinus*). At the vicinity of the proposed POD location, this vegetation occurs in thick stands on the stream bank from the high flow channel to the top of the bank. Some areas of the low flow channel have also been colonized by willows and alders (Sands 2002).

Riparian and wetland habitats are protected by the California Fish and Game Code. Although formal wetland delineation has not been conducted at the project site, it is assumed that the stream channel has the characteristics for classification of a jurisdictional wetland under the

federal Clean Water Act (CWA). The U.S. Army Corps of Engineers (USACE) administers the CWA, and dredging or filling activities within jurisdictional wetlands require a permit from USACE. The project proposes placing a new stream diversion pipe at a new POD location on the Arroyo Leon and does not include dredging or filling.

Impacts and Mitigations

Diversion of water from streams can have large-scale detrimental impacts on aquatic biota by reducing or eliminating stream flow. These impacts are particularly problematic during the late spring and summer when natural stream flow declines. At a smaller scale, the physical transport of water by pipes may harm aquatic organisms living in the stream. Mitigation Measure 2a-c, discussed in the "Hydrology and Water Quality" section of this document, together with Mitigation Measure 3 provided below, will avoid or significantly reduce biological impacts of diverting stream water at the proposed POD. These terms have been accepted by the Petitioner and will be included as terms and conditions of the water appropriation license issued by the State Water Board.

Impact 3: Aquatic organisms may become entrained in the diversion pipe when water is transported from the stream. This is a significant impact.

Mitigation Measure 3: To prevent the entrainment of aquatic species in the diversion pipe, the Petitioner shall permanently attach a screen to the intake opening of the diversion pipe that meets the specifications required by DFG and meets the criteria of the *Draft Guidelines* (DFG/NMFS 2002). This screen will be monitored on a monthly basis and repaired if necessary.

As discussed in the Project Description section above, no deconstruction activities will occur at the former PODs. This will avoid the potential short-term degradation of water quality and stream habitat.

Conclusion

The relocation of a POD on the project stream could potentially impact several sensitive species. However, the mitigation measures detailed above will ensure that all biological impacts will be reduced to a level of insignificance.

Table 2: CNDDB search results: Sensitive animal species potentially occurring on-site

Scientific Name	Common Name	Federal Status	DFG Status	Potential to occur on site
Actinemys marmorata	Western pond turtle	-	SSC	Yes.
Ambystoma californiense	California tiger salamander	T	CE, SSC	Yes.
Antrozous pallidus	Pallid bat	-	SSC	Yes. Aerial foraging habitat exists on-site. However, the project will not impact this habitat.
Athene cunicularia	Burrowing owl	-	SSC	Yes. This species' primary habitat is open, dry grasslands, which occur on-site. This habitat will not be impacted by the project.
Callophrys mossii bayensis	San Bruno elfin butterfly	E	-	No. While this species may occasionally pass through the site, its primary habitat is coastal scrub, which is not found on the property.
Charadrius alexandrinus nivosus	Western snowy plover	T	SSC	No. This species nests on sandy beaches and its habitat is limited to coastal areas.
Eucyclogobius newberryi	Tidewater goby	E	SSC	No, this species' habitat is restricted to coastal and estuarine environments, which do not occur on site.
Euphydryas editha bayensis	Bay checkerspot butterfly	T	-	No. While this species may occasionally pass through the site, this species is found primarily in grassland and serpentine habitat, which are not found on the property.
Falco columbarius	Merlin	-	WL	Yes. However, the marginal foraging habitat on the property will not be impacted by the project.
Falco peregrinus anatum	American peregrine falcon	D	D, FP	Yes. However, the marginal foraging habitat on the property will not be impacted by the project.
Geothlypis trichas sinuosa	Saltmarsh common yellowthroat	-	SSC	Yes. However, the marginal foraging habitat on the property will not be impacted by the project.
Laterallus jamaicensis coturniculus	California black rail	-	T, FP	No. This species' habitat includes tidal marshes and mudflats, which are not found on the property.
Melospiza melodia pusillula	Alameda song sparrow	-	SSC	No. This species' habitat is limited to tidal marshes, which are not found on the property.
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	-	SSC	Yes.
Nyctinomops macrotis	Big free-tailed bat	-	SSC	Yes. Aerial foraging habitat exists on-site. However, the project will not impact this habitat.
Oncorhynchus kisutch	Coho salmon	T	-	Yes.
Oncorhynchus mykiss irideus	Steelhead (Central Coast ESU)	T	-	Yes.
Phalacrocorax auritus	Double-crested cormorant	-	WL	No. This species' feeding and nesting habitat is limited to coastal areas and estuaries.
Plebejus icarioides missionensis	Mission blue butterfly	E	-	No. While this species may occasionally pass through the site, its primary habitat is coastal scrub and grasslands, which is not found on the property.
Rallus longirostris obsoletus	California clapper rail	E	E, FP	No. This species' habitat includes tidal marshes and mudflats, which are not found on the property.
Rana boylii	Foothill yellow-legged frog	-	SSC	Yes.
Rana draytonii	California red-legged frog	T	SSC	Yes.
Reithrodontomys raviventris	Salt-marsh harvest mouse	E	E, FP	No. This species' habitat is restricted to coastal and estuarine environments, which do not occur on site.
Speyeria zerene myrtleae	Myrtle's silverspot	E	-	No. While this species may occasionally pass through the site, its primary habitat is coastal dunes and scrub, which are not found on the property.
Taxidea taxus	American badger	-	SSC	Yes.
Thamnophis sirtalis tetrataenia	San Francisco garter snake	E	E, FP	Yes.

Table 3: CNDDB search results: Sensitive plant species potentially occurring on-site

Scientific Name	Common Name	Federal Status	DFG Status	CNPS List	Potential to occur on site
Acanthomintha duttonii	San Mateo thorn-mint	E	E	1B.1	No. This species occurs in chaparral and grassland habitats, which are not found on the property.
Allium peninsulare var. franciscanum	Franciscan onion	-	-	1B.2	No. This species occurs in chaparral, upland cismontane woodlands, serpentine, and grassland habitats, which are not found on the property.
Amsinckia lunaris	bent-flowered fiddleneck	-	-	1B.2	No. This species occurs in chaparral, upland cismontane woodlands, and grassland habitats, which are not found on the property.
Arctostaphylos andersonii	Anderson's manzanita	-	-	1B.2	No. This species occurs in coniferous forest, broadleaf upland forest and chaparral habitats, which are not found on the property.
Arctostaphylos montaraensis	Montara manzanita	-	-	1B.2	No. This species occurs in coastal scrub and chaparral habitats, which are not found on the property.
Arctostaphylos regismontana	Kings Mountain manzanita	-	-	1B.2	No. This species occurs in coniferous forest, broadleaf upland forest and chaparral habitats, which are not found on the property.
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	-	-	1B.2	Yes.
California macrophylla	round-leaved filaree	-	-	1B.1	No. This species occurs in cismontane woodland and grassland habitats, which are not found on the property.
Centromadia parryi ssp. parryi	pappose tarplant	-	-	1B.2	No. This species occurs in chaparral, coastal prairie, grasslands, meadows and seeps, marshes and swamps. None of these habitats are found on the property.
Chorizanthe cuspidata var. cuspidata	San Francisco Bay spineflower	-	-	1B.2	No. This species occurs in coastal dune, prairie, scrub and occasionally in chaparral, which are not found on the property.
Cirsium andrewsii	Franciscan thistle	-	-	1B.2	No. This species occurs in broadleaf upland forest, coastal scrub and prairie, and serpentine habitats, which are not found on the property.
Cirsium fontinale var. fontinale	fountain thistle	E	E	1B.1	No. This species occurs in chaparral, upland cismontane woodlands, and grassland habitats, which are not found on the property.
Collinsia multicolor	San Francisco collinsia	-	-	1B.2	No. This species occurs in closed cone forests, coastal scrub and serpentine habitats, which are not found on the property.
Cordylanthus maritimus ssp. palustris	Point Reyes bird's-beak	-	-	1B.2	Yes.
Dirca occidentalis	western leatherwood	-	-	1B.2	Yes.
Eriophyllum latilobum	San Mateo woolly sunflower	E	E	1B.1	No. This species occurs only in cismontane habitat, which is not found on the property.
Fritillaria biflora var. ineziana	Hillsborough chocolate lily	-	-	1B.1	No. This species occurs only in cismontane habitat, which is not found on the property.
Fritillaria liliacea	fragrant fritillary	-	-	1B.2	No. This species occurs in closed cone forests, coastal scrub and serpentine habitats, which are not found on the property.
Grindelia hirsutula var. maritima	San Francisco gumplant	-	-	1B.2	No. This species occurs in coastal scrub and grassland habitats, which are not found on the property.
Hesperevax sparsiflora var. brevifolia	short-leaved evax	-	-	1B.2	No. This species occurs in coastal dune and scrub, which are not found on the property.
Hesperolinon congestum	Marin western flax	T	T	1B.1	No. This species occurs in chaparral and grassland habitats, which are not found on the property.
Horkelia cuneata ssp. sericea	Kellogg's horkelia	-	-	1B.1	No. This species occurs in coastal dune, prairie, scrub and occasionally in chaparral, which are not found on the property.
Horkelia marinensis	Point Reyes horkelia	-	-	1B.2	No. This species occurs in coastal dune, prairie, scrub and occasionally in chaparral, which are not found on the property.
Lasthenia californica ssp. macrantha	perennial goldfields	-	-	1B.2	No. This species occurs only on coastal bluffs, dunes, and scrub.

Table 3, continued.

Scientific Name	Common Name	Federal Status	DFG Status	CNPS List	Potential to occur on site
Leptosiphon croceus	coast yellow leptosiphon	-	-	1B.1	No. This species occurs in coastal dune, prairie, scrub and occasionally in chaparral, which are not found on the property.
Leptosiphon rosaceus	rose leptosiphon	-	-	1B.1	No. This species only occurs on coastal scrub habitat, which is not found on the property.
Lessingia arachnoidea	Crystal Springs lessingia	-	-	1B.2	No. This species occurs in chaparral, upland cismontane woodlands, and grassland habitats, which are not found on the property.
Malacothamnus aboriginum	Indian Valley bush-mallow	-	-	1B.2	No. This species occurs in chaparral, upland cismontane woodlands, and grassland habitats, which are not found on the property.
Malacothamnus arcuatus	arcuate bush-mallow	-	-	1B.2	No. This species occurs in chaparral, upland cismontane woodlands, and grassland habitats, which are not found on the property.
Malacothamnus davidsonii	Davidson's bush-mallow	-	-	1B.2	Yes.
Malacothamnus hallii	Hall's bush-mallow	-	-	1B.2	No. This species occurs in chaparral and coastal scrub habitats, which are not found on the property.
Microseris paludosa	marsh microseris	-	-	1B.2	No. This species occurs in coniferous forest, cismontane woodland, coastal scrub and grasslands which are not found on the property.
Pentachaeta bellidiflora	white-rayed pentachaeta	E	E	1B.1	No. This species occurs in coastal dune, prairie, scrub and occasionally in chaparral, which are not found on the property.
Plagiobothrys chorisianus var. chorisianus	Choris' popcorn-flower	-	-	1B.2	No. This species occurs in coastal dune, prairie, scrub and occasionally in chaparral, which are not found on the property.
Polemonium carneum	Oregon polemonium	-	-	2.2	No. This species occurs in coastal scrub and chaparral habitats, which are not found on the property.
Potentilla hickmanii	Hickman's cinquefoil	E	E	1B.1	No. This species occurs in chaparral, coastal prairie, grasslands, meadows and seeps, marshes and swamps. None of these habitats are found on the property.
Silene verecunda ssp. verecunda	San Francisco campion	-	-	1B.2	No. This species occurs in coastal dune, prairie, scrub and occasionally in chaparral and interior grasslands. None of these habitats occur on the property.
Trifolium depauperatum var. hydrophilum	saline clover	-	-	1B.2	Yes.
Triphysaria floribunda	San Francisco owl's-clover	-	-	1B.2	No. This species occurs in coastal scrub and grassland habitats, which are not found on the property.
Triquetrella californica	coastal triquetrella	-	-	1B.2	No. This species only occurs on coastal scrub habitat, which is not found on the property.

Federal and State abbreviations

E = Endangered
T = Threatened
SSC = Species of Special Concern
FP = Fully Protected
WL = Watch List
D = Delisted

CNPS = California Native Plant Society (CNPS) categories

1B.1 = Rare – A high degree of threat
1B.2 = Rare – A moderate degree of threat
2.2 = Fairly endangered in California, but more common elsewhere

4. **AGRICULTURAL RESOURCES**. In determining whether impacts to agricultural resources are significant environmental impacts, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping & Monitoring Program of the California Resources Agency, to non-agricultural uses?	☐	☐	☐	X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	X

Discussion

This project property includes 862 acres of land. Arable land covers over 192 acres of the property, 164 acres of which is leased by POST for crop cultivation. The site is designated by the San Mateo County General Plan for Agricultural use, and the changes proposed in the petition would not change this use (San Mateo County 1988). No negative impacts to agricultural resources will occur.

Conclusion

The proposed change will not impact agricultural resources.

5. **NOISE**. Would the project result in:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	X

b) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	X
e) 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 expose people residing in or working in the project area to excessive noise levels?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project expose people residing in or working in the project area to excessive noise levels?	☐	☐	☐	X

Discussion

The project site is not located in an area serving a private airstrip or near any other excessive noise generating use; nor is it within an area governed by an airport land use plan. The mechanical pump at the new POD will not generate noise which can be heard beyond a few feet of the pump house.

Conclusion

The project will not generate any noise related impacts.

6. **LAND USE AND PLANNING**. Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	X

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	X

Conclusion

Implementation of the project is consistent with land use designations of the property and LCP policies pertaining to the protection of environmentally sensitive habitats. No land use impacts or related policy conflicts will occur.

7. **MINERAL RESOURCES**. Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	☐	☐	☐	X
b) 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?	☐	☐	☐	X

Discussion

The project property is not used for mineral resources extraction and is not designated by the County's General Plan as an area where mineral resources occur or should be conserved. The continued water diversion from the Arroyo Leon at a new POD will not affect mineral resources in the area or elsewhere in San Mateo County.

Conclusion

The project will not have any impacts on mineral resources.

8. **HAZARDS and HAZARDOUS MATERIALS**. Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	X
b) 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?	☐	☐	☐	X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	☐	☐	☐	X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or to the environment?	☐	☐	☐	X
e) 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 a public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	X
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	X

Discussion

The project proposes diverting stream water for crop irrigation from a new POD location and upgrading diversion equipment at the new POD to mitigate for potential biotic impacts. This does not involve the use, transport or disposal of hazardous substances.

Conclusion

The project will not generate any impacts pertaining to hazards or hazardous materials.

9. **POPULATION AND HOUSING**. Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Induce substantial population growth in an area either directly (*e.g.*, by proposing new homes and businesses) or indirectly (*e.g.*, through extension of roads or other infrastructure)?	☐	☐	☐	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X

Discussion

The project proposes diverting stream water for crop irrigation from a new POD location and upgrading diversion equipment at the new POD. These uses will not displace existing housing or people and will not generate population growth.

Conclusion

This project will not generate any impacts on population or housing.

10. **TRANSPORTATION / CIRCULATION**. Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (*i.e.*, result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	X
b) Substantially increase hazards due to a design feature (*e.g.*, sharp curves or dangerous intersections) or incompatible uses (*e.g.*, farm equipment)?	☐	☐	☐	X
c) Result in inadequate emergency access?	☐	☐	☐	X
d) Result in inadequate parking capacity?	☐	☐	☐	X
e) Exceed, either individually or cumulatively, a level-of-service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	X
f) Conflict with adopted policies supporting alternative transportation (*e.g.*, bus turnouts, bicycle racks)?	☐	☐	☐	X
g) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	X

Discussion

The project proposes diverting stream water for crop irrigation from a new POD location and upgrading diversion equipment at the new POD to mitigate for potential biotic impacts. This will not generate traffic. The project is located in a rural area where traffic levels are generally low with adequate levels of service. The one arterial roadway in the area is Highway 1. The project property is located on the inland side of Highway 1. Implementation of the project will not generate additional traffic use beyond present levels.

Conclusion

There are no traffic impacts that will occur with this project.

11. **PUBLIC SERVICES**. Would the project result in substantial adverse physical impacts associated with the provision of 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:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Fire protection?	☐	☐	☐	X
b) Police protection?	☐	☐	☐	X
c) Schools?	☐	☐	☐	X
d) Parks?	☐	☐	☐	X
e) Other public facilities?	☐	☐	☐	X

Discussion

The project will not generate a need for police, fire protection of other public services beyond what is provided now for persons and properties in the area. Meter readings at the POD will be reported to a public agency, but this will be a State agency, the State Water Board, not a local agency that provides the basic public services listed here.

Conclusion

The project will not have any impacts on public services.

12. **UTILITIES AND SERVICE SYSTEMS**. Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?	☐	☐	☐	X

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?	☐	☐	☐	X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	X
e) Result in a determination by the wastewater treatment provider that 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?	☐	☐	☐	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	X
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	X

Discussion

The project will not generate wastewater or solid waste; nor will it require the construction of storm drainage facilities. The amount of water diverted at the POD will provide sufficient water to supply irrigation at the POU. The diversion rate at the new POD will be regulated to prevent hydrological and biological impacts, as discussed in the Biological Resources and Hydrology sections of the checklist.

Conclusion

The project will not generate any impacts on utility and service systems.

13. **AESTHETICS**. Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	X

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☐	X

Discussion

The project does not have facilities that are within views of a scenic vista. The only physical changes that will occur are the construction of a pump house and diversion pipes. These structures will not be visible from Highway 1 (a California scenic highway) or from Higgins Purisima Road, which bisects the property.

Conclusion

The project will not result in any visual impacts.

14. **CULTURAL RESOURCES**. Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	X
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	☐	X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	X
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	X

Discussion

The project will not include digging, trenching or other forms of excavation where buried archaeological resources might be discovered. All pipe connections between the POD and the storage reservoirs will be pipe laid on the surface except where it crosses Higgins Purisima Road. This short subsurface pipe already exists and no excavation will be required.

Conclusion

The relocation of the POD will not generate any impacts to archaeological resources.

15. **RECREATION.** Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) 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?	☐	☐	☐	X
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	X

Discussion

The project is located on the Johnston Ranch a property owned by POST and used for agriculture. There are no recreational uses on the property.

Conclusion

No recreational impacts will occur from implementing this project.

16. **GREENHOUSE GASES/GLOBAL WARMING.** Would the project:

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?	☐	☐	☐	X
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	X

Discussion

The project will use an electric pump, which will generate minor exhaust emissions. However, these emissions will not exceed those that occurred at the former PODs. Therefore there will not

be any increase above baseline greenhouse gas conditions and diversion at the new POD will not result in contribution to global warming or greenhouse gas impacts.

Conclusion

The relocation of the POD to the proposed location will not generate any new significant greenhouse gas/global warming impacts. No mitigation measures are required to address environmental impacts.

17. **MANDATORY FINDINGS OF SIGNIFICANCE**.

	Potential Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Does the project have the potential to 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, 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?	☐	X	☐	☐
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)	☐	☐	☐	X
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	X

This project will not generate cumulative significant impacts to aquatic organisms or downstream users. Although potentially significant impacts related to soils, hydrology and biological resources exist, these issues and mitigation measures to address them are discussed in the topical sections above. Incorporation of the mitigation measures specified in the checklist discussions will avoid, reduce or otherwise effectively mitigate identified impacts to a less than significant level.

VI. ENVIRONMENTAL DETERMINATION

On the basis of this initial evaluation

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	☐
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	X
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	☐
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	☐
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	☐

Prepared By:

Kim Tschantz — January 10, 2011

Reviewed by:
Kim Tschantz, MSP, CEP
Cypress Environmental and
Land Use Planning — Date

Kirsten Sellheim, Environmental Scientist — 12 JAN 2011
Coastal Streams Unit — Date

Matthew McCarthy, Chief — January 13, 2011
Coastal Streams Unit — Date

for Phillip G. Crader, Manager — Katherine Mrowka acting — 7-8-11
Permitting and Licensing Section
Division of Water Rights — Date

(Form updated 3/28/00)

Authority: Public Resources Code Sections 21083, 21084, 21084.1, and 21087.

Reference: Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.1 through 21083.3, 21083.6 through 21083.9, 21084.1, 21093, 21094, 21151; *Sundstrom v. County of Mendocino*, 202 Cal. App. 3d 296 (1988); *Leonoff v. Monterey Board of Supervisors*, 222 Cal. App. 3d 1337 (1990).

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