



# Conjunctive Use Plan for the San Lorenzo River Watershed

## Initial Study – Mitigated Negative Declaration

*prepared by*

**San Lorenzo Valley Water District**

13060 Highway 9

Boulder Creek, California 95006

Contact: Carly Blanchard, Environmental Planner

*prepared with the assistance of*

**Rincon Consultants, Inc.**

437 Figueroa Street, Suite 203

Monterey, California 93940

**July 2021**



**RINCON CONSULTANTS, INC.**

Environmental Scientists | Planners | Engineers

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# Acronyms and Abbreviations

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AFY	acre-feet per year
AB	Assembly Bill
AFY	acre-feet per year
AMBAG	Association of Monterey Bay Area Governments
AQMP	Air Quality Management Plan
ASR	aquifer storage and recovery
BAAQMD	Bay Area Air Quality Management District
BMP	best management practices
CAA	Clean Air Act
CALGreen	California Green Building Standards Code
CARB	California Air Resources Board
CAS	Climate Action Strategy
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CNEL	community noise equivalent level
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
CQQQS	California Ambient Air Quality Standards
cy	cubic yards
CZU	abbreviation for CAL FIRE San Mateo Santa Cruz Unit
dB	decibel
DND-DNB	Do Not Drink, Do Not Boil
DOC	Department of Conservation
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GAC	granular activated carbon

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GHG	greenhouse gas
GP	General Plan
GSP	Groundwater Sustainability Plan
GWP	global warming potential
HCP	Habitat Conservation Plan
HDPE	High Density Poly Ethylene
LCP	Local Coastal Program
Leq	one-hour equivalent noise level
LF	linear feet
MBARD	Monterey Bay Air Resources District
MIEX	magnetic ion exchange
MM	mitigation measure
MT	metric ton
MWh	megawatt-hours
NAAQS	National Ambient Air Quality Standards
NCCAB	North Central Coast Air Basin
NCCP	Natural Community Conservation Plan
NMFS	National Marine Fisheries Service
NOX	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
O&M	operations and maintenance
OHWM	ordinary high water mark
PM <sub>10</sub>	particulate matter with diameters of ten microns or less
PM <sub>2.5</sub>	particulate matter with diameters of 2.5 microns or less
PPV	peak particle velocity
RCEM	Road Construction Emissions Model
RCNM	Roadway Construction Noise Model
RFP	Request for Proposals
RMS	root mean square
ROG	reactive organic gases
ROW	right-of-way
RS	Suburban Residential
RTP	Regional Transportation Plan

RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SGMA	Sustainable Groundwater Management Act
SLOAPCD	San Luis Obispo County Air Pollution Control District
SLRBT	San Lorenzo River at Big Trees
SLVWD	San Lorenzo Valley Water District
SMGB	Santa Margarita Groundwater Basin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compounds
WAA	Water Availability Assessment

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# Initial Study

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## 1. Project Title

Conjunctive Use Plan for the San Lorenzo River Watershed

## 2. Lead Agency Name and Address

San Lorenzo Valley Water District  
13060 Highway 9  
Boulder Creek, California 95006

## 3. Contact Person and Phone Number

Carly Blanchard  
Environmental Planner  
831-338-2153 ext. 639

## 4. Project Location

Water infrastructure associated with the various water use scenarios identified in the Conjunctive Use Plan is located throughout the San Lorenzo Valley Water District's service area in Santa Cruz County.

Specifically, the physical improvements proposed under the Loch Lomond Scenario would be located in the community of Felton, California. The northern terminus of infrastructure improvements would occur under the San Lorenzo Way Bridge, located near 6660 Highway 9, Felton, California 95018. A pipeline would be suspended under the bridge within the bridge development footprint, running east to west. From the western side of the San Lorenzo Way bridge, pipeline installation would run underground under Highway 9, along Clearview Place, and south along Cooper Street within the public right-of-way. The new waterline would then run south within the Cooper Street right-of-way to tie-in to the existing water line at Farmer Street, near 6560 Highway 9 in Felton. Additional infrastructure upgrades would occur at Kirby Water Treatment Plant, located at 195 Kirby Street in Felton (Assessor's Parcel Number 065-281-03).

## 5. Project Sponsor's Name and Address

San Lorenzo Valley Water District  
13060 Highway 9  
Boulder Creek, California 95006

## 6. General Plan Designation

The physical improvements proposed under the Loch Lomond Scenario would occur primarily within public right-of-way in the paved roadway in a neighborhood designated Suburban Residential (RS) in

the Santa Cruz County General Plan. Upgrades would also occur at the Kirby Water Treatment Plant, which is also designated Suburban Residential (RS) in the Santa Cruz County General Plan. A portion of the Conjunctive Use Plan area is also within the Felton Specific Plan area.

## 7. Zoning

The physical improvements proposed under the Loch Lomond Scenario would occur primarily within public right-of-way in the paved roadway in a neighborhood zoned Single-Family Residential (SFR). Upgrades would also occur at the Kirby Water Treatment Plant, which is zoned Agricultural (A).

## 8. Description of Project

### **Project Background**

#### *San Lorenzo River Watershed and San Lorenzo Valley Water District Water Systems*

The San Lorenzo River drains a 138-square-mile watershed located in northern Santa Cruz County. It consists of a 25-mile mainstem and nine principal tributaries, including Branciforte, Carbonera, Zayante, Bean, Fall, Newell, Bear, Boulder, and Kings creeks. The San Lorenzo Valley Water District (SLVWD or District) serves approximately 26,000 customers in northern Santa Cruz County with water sourced from nine stream diversions on tributaries to the San Lorenzo River, one groundwater spring, and eight active groundwater wells within the Santa Margarita Groundwater Basin (SMGB).

The District's operations are comprised of three largely independent water systems (Figure 1):

1. North System located in the San Lorenzo Valley;
2. South System located in the Scotts Valley area; and
3. Felton System located in Felton.

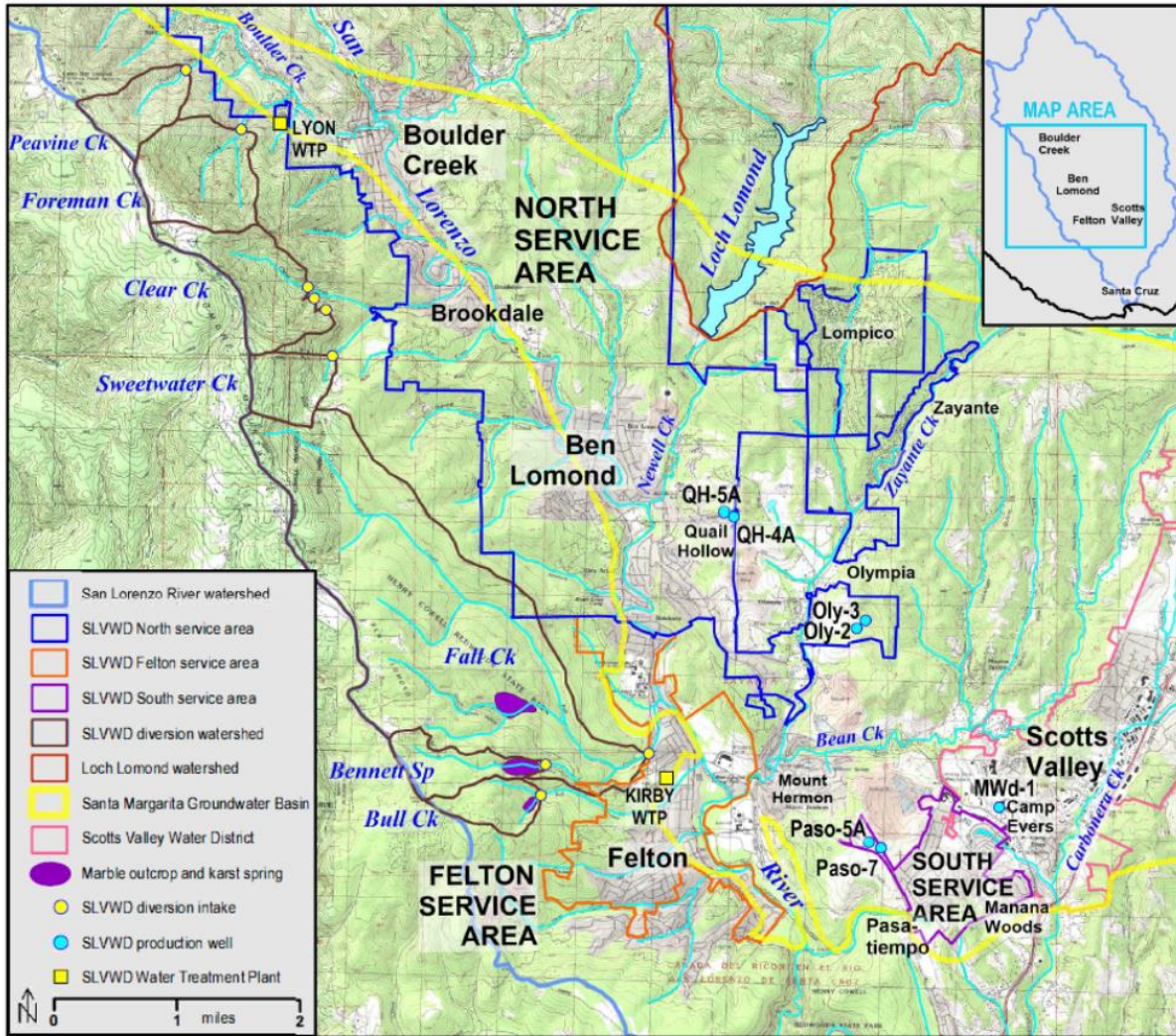
Each system typically produces water independently in response to immediate water demand, as the systems lack substantial surface storage infrastructure or interconnection.

#### *Conjunctive Use Planning*

"Conjunctive" water use refers to the coordinated use of surface water and groundwater supplies to efficiently manage water consumption and natural storage through wet- and dry-climatic conditions. In 2019, SLVWD conducted technical evaluations to analyze a wide range of alternative scenarios for conjunctively managing its surface water and groundwater sources to improve the reliability of its water supplies while also maintaining or improving flows and habitat quality for steelhead (*Oncorhynchus mykiss*) and coho salmon (*O. kisutch*) in the San Lorenzo River watershed.

In January 2019, a Water Availability Assessment (WAA) was prepared, identifying options for increasing water supply reliability and dry season streamflows through the conjunctive use of available surface water and groundwater resources (Exponent 2019; Appendix A). The report presented and evaluated 22 alternative scenarios for optimizing the conjunctive use of current and potential water sources using existing and potential infrastructure.

**Figure 1 Regional Location, SLVWD Service Areas, Diversion Watersheds, Points of Diversion, Treatment Plants, and Production Wells**



Source: SLVWD 2021

In November 2019, a Fisheries Resource Considerations report was prepared to evaluate and summarize the expected effects to fisheries resources of the prioritized conjunctive use scenarios from the WAA (Podlech 2019; Appendix B). The Fisheries Resource Considerations report recommended a combination of scenarios that, if implemented together over time, would promote watershed-wide improvements to instream flows.

The 2019 studies concluded that increasing the conjunctive use of groundwater and surface water supplies within the San Lorenzo River watershed has the potential to improve water rights compliance, instream flows, and groundwater storage. Based on the 2019 studies, SLVWD selected four conjunctive use scenarios to advance to a Conjunctive Use Plan. The plan has been developed concurrently with the Groundwater Sustainability Plan (GSP) being prepared by the Santa Margarita Groundwater Agency and the Habitat Conservation Plan (HCP) being prepared by the City of Santa Cruz. SLVWD coordinated with both agencies in the process of developing and finalizing the Conjunctive Use Plan.

### *CZU Lightning Complex Fires*

Beginning in August 2020, the CZU Lightning Complex fires burned through San Mateo and Santa Cruz counties, including portions of the SLVWD service area and Conjunctive Use Plan area. In total, the fire burned approximately 86,500 acres, destroyed 7,567 buildings, and damaged SLVWD water supply infrastructure, resulting in significant operational capacity losses. Damaged or destroyed infrastructure included: intake lines, approximately seven miles of distribution piping, over 30 storage and/or settling tanks, and four surface water intakes. A full list of infrastructure damaged by the fire is provided in Appendix C.

High Density Poly Ethylene (HDPE) mains in the burn area were damaged and melted, causing depressurization of the water distribution system. Immediately after discovery, SLVWD contacted the State Water Resources Control Board (SWRCB), which recommended issuing a precautionary Do Not Drink, Do Not Boil (DND-DNB) notice to all affected residents in the depressurized zones (SLVWD 2021b). The DND-DNB order was in effect for portions of the District's service area until October 23, 2020.

The proposed conjunctive use scenarios, as described later in this section, would utilize existing District infrastructure, some of which was damaged or destroyed in the CZU Lightning Complex Fire. Specifically, the surface water intakes at Foreman Creek, Peavine, Clear Creek, and Sweetwater Creek would be utilized by the plan, and were all damaged and/or destroyed in the fire.

The District performed repairs at the Foreman Creek intake between September 2020 and January 2021, including replacing the intake lid, resealing the intake basin, and replacing piping between the intake and nearby Lyon Treatment plant. The intake is currently operating, but the pressure break structure and control room were destroyed and still require replacement. The District intends to replace the remaining infrastructure damaged by the fire, regardless of whether the Conjunctive Use Plan proceeds. The District released a Request for Proposals (RFP) on May 5, 2021 for a Constructability Study related to the replacement of approximately seven linear miles of raw water supply cross-country pipeline and Peavine, Clear Creek, and Sweetwater intake structures, all of which were destroyed during the CZU fire event. SLVWD is considering alternative replacement strategies for this infrastructure, including replacement in-kind (HDPE pipe) at grade; use of alternate, more fire-resistant materials; installation of HDPE or other material pipe below grade; and re-routing of the pipeline. Proposals were submitted in June 2021 and the Board of Directors awarded a contract to the selected firm in June 2021. Construction of the project is anticipated to take three to five years.

## Project Description

SLVWD and the County of Santa Cruz have jointly developed the San Lorenzo River Watershed Conjunctive Use Plan (plan, project, or proposed project) to identify surface and groundwater supply reliability projects within the San Lorenzo River watershed. The main purpose of the plan is to optimize the conjunctive use of surface and groundwater sources to improve aquatic habitat and water supply reliability within the San Lorenzo River watershed.

The plan includes four selected conjunctive use scenarios, which are described in detail below. Implementation of the selected scenarios would allow more flexibility to divert surface flows during the winter and spring (peak flow season) and/or provide in-lieu groundwater recharge to improve surface flows during the summer (low flow season).

### *Proposed Conjunctive Use Plan Scenarios*

A summary of the four proposed scenarios is provided below. While four scenarios are identified in the plan, this IS-MND only evaluates the potential environmental impacts of three scenarios. As described below, the fourth scenario would be subject to future CEQA review prior to any approval. Two of the evaluated scenarios (the SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario) would be implemented in the short-term (within the next five years), and one of the scenarios (the Loch Lomond Scenario) would be implemented in the long-term (greater than five years). The plan does not preclude SLVWD from undertaking additional water supply reliability projects or actions within the San Lorenzo River watershed, but these would be subject to future CEQA review prior to any approval.

## **SLRBT LOW-FLOW REQUIREMENTS MODIFICATION SCENARIO<sup>1</sup>**

### ***Felton System Complies with Required Bypass Only***

The District's Felton water right permit contains two separate flow terms dictating minimum instream flow requirements at different times of the year. One requirement in the permit establishes minimum bypass flows to be maintained in Fall Creek below the diversion.<sup>2</sup> The other requirement is intended to protect minimum low flows in the San Lorenzo River at the San Lorenzo River at Big Trees (SLRBT) gage.<sup>3</sup>

Under the SLRBT Low-Flow Requirements Modification Scenario, Fall Creek bypass flows would continue to comply with the current permit requirements, but SLVWD would seek a water right permit modification to relieve it of the SLRBT low-flow requirements that at times can prohibit all diversions for the Felton System. The District's bypass flow requirements on Fall Creek would continue to ensure that proportionally appropriate contributions of Fall Creek flows to the mainstem would be protected during summer baseflow conditions. Figure 2 shows the diversion locations associated with the SLRBT Low-Flow Requirements Modification Scenario. This water supply is the Felton System's sole source of water.

No new infrastructure would be required under this scenario.

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<sup>1</sup> The SLRBT Low-Flow Requirements Modification Scenario is named "Scenario 1b" in the WAA, Fisheries Resource Considerations, and Conjunctive Use Plan documents. It has been renamed in this IS-MND document for clarification and ease of reading.

<sup>2</sup> Minimum bypass flows are required to be maintained, measuring at least 1.5 cubic feet per second [cfs] in the winter/spring and 1.0 cfs in the summer/fall during normal water years, and 0.75 cfs in the winter/spring and 0.5 cfs in the summer/fall during dry water years.

<sup>3</sup> Minimum low flows are required to be at least 10 cfs in September, 25 cfs in October, and 20 cfs November through May.

## **NORTH SYSTEM DIVERSIONS SCENARIO**

### ***South System Imports North System Unused Potential Diversions***

The North System Diversions Scenario<sup>4</sup> would promote “in-lieu groundwater recharge” of the SMGB by supplying the South System with imports of North System unused potential diversions. In-lieu recharge occurs when surface water is utilized “in-lieu” of pumping groundwater, resulting in an equal amount of storage in the groundwater basin.

Under the North System Diversions Scenario, SLVWD would export unused potential diversions from the North System to the South System as a substitute for pumping groundwater from the Pasatiempo groundwater wells. The WAA defines the term “unused potential diversions” as potential diversions within existing water rights, available flows, and diversion capacities that exceed demand within the service area within which they are diverted, but which potentially could be transferred to another system within the District’s service area (Exponent 2019). Figure 3 shows the diversion locations associated with the North System Diversions Scenario.

No new infrastructure would be required under this scenario. Infrastructure currently used for emergencies only, such as Pipeline Interties #3 and #4, would be used for regular operation.

## **LOCH LOMOND SCENARIO**

### ***South System Imports from Loch Lomond***

The Loch Lomond Scenario<sup>5</sup> would promote in-lieu recharge of the SMGB by supplying the South System with imports of Loch Lomond Reservoir allotment water.

Under the Loch Lomond Scenario, the South System would import an average of 245 AFY from Loch Lomond Reservoir, ranging between 120 and 290 AFY. The South System’s use of Loch Lomond Reservoir water would result in a simulated 67 percent reduction in groundwater pumping from the Pasatiempo wells. The North System would also import an average of 4 AFY of Loch Lomond Reservoir water and the Felton System would import an average of 50 AFY to help meet unmet demand in those systems.

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<sup>4</sup> The North System Diversion Scenario is named “Scenario 1f” in the WAA, Fisheries Resource Considerations, and Conjunctive Use Plan documents. It has been renamed in this IS-MND document for clarification and ease of reading.

<sup>5</sup> The Loch Lomond Scenario is named “Scenario 2b” in the WAA, Fisheries Resource Considerations, and Conjunctive Use Plan documents. It has been renamed in this IS-MND document for clarification and ease of reading.

Figure 2 SLRBT Low-Flow Requirements Modification Scenario Diversion Locations

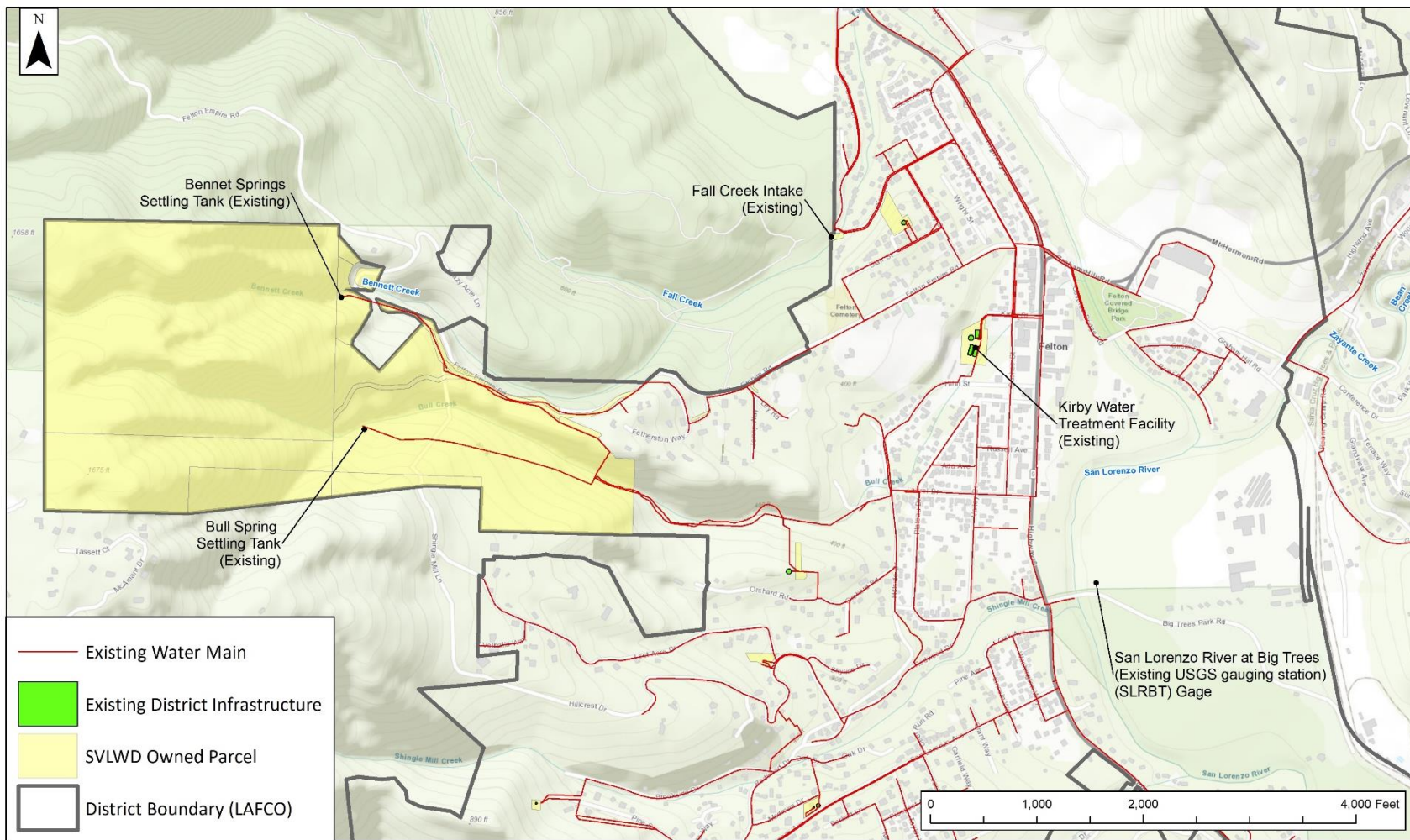
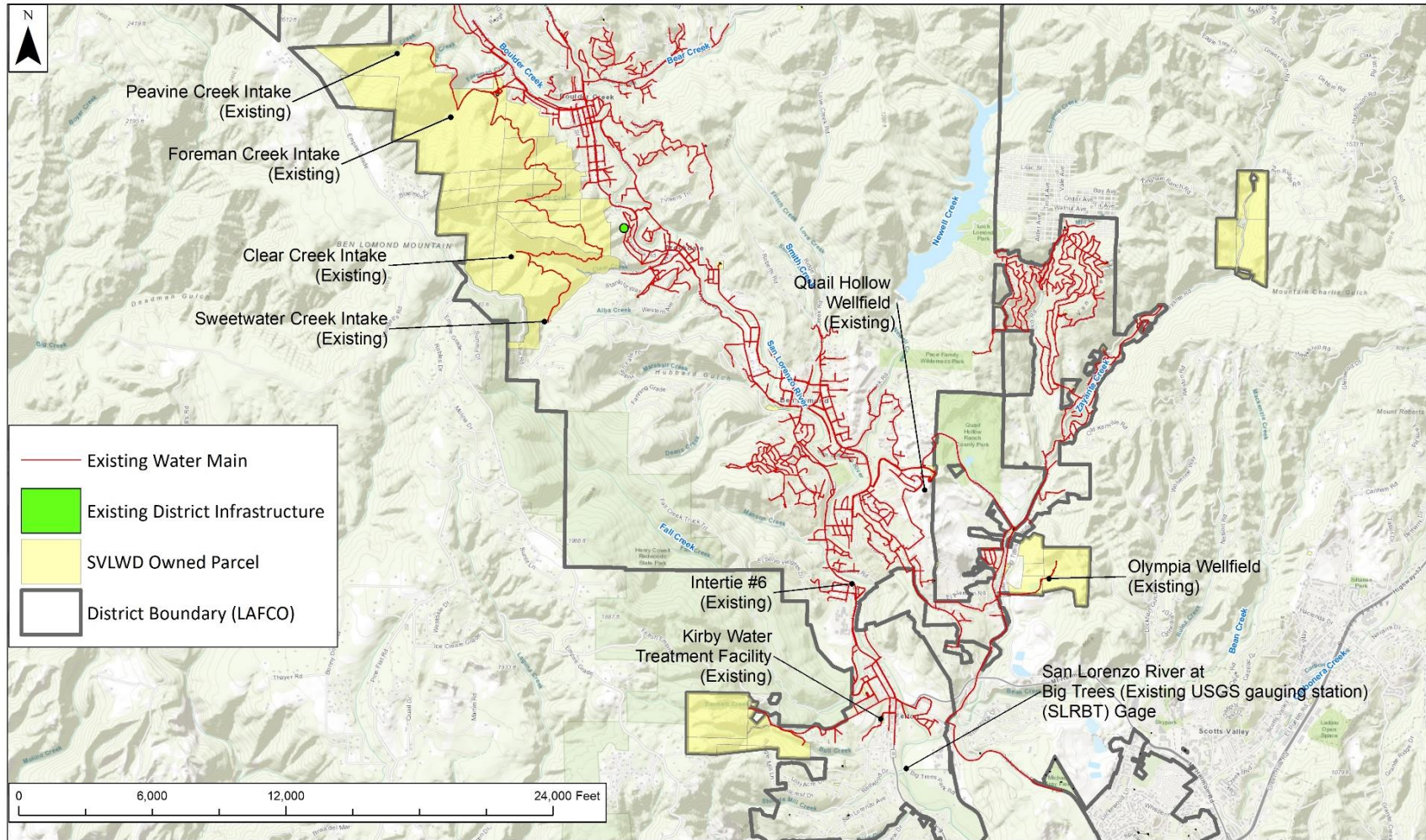


Figure 3 North System Diversions Scenario Diversion Locations





Unlike the SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario, this scenario would require the installation of new infrastructure. In order to exercise its allotment for Loch Lomond Reservoir water, SLVWD would need to construct the following new infrastructure, shown in the map in Figure 4 and described in more detail in the *Construction* section:

- A new connection between the Newell Creek pipeline (owned and operated by the City of Santa Cruz) and Felton raw water system on the west side of the San Lorenzo Way bridge, approximately 0.4 mile north of the Highway 9 and Graham Hill Road intersection in Felton;
- Installation of a new raw water pipeline across the San Lorenzo River, suspended under the San Lorenzo Way bridge;
- Installation of a new underground raw water line that would run west from the new San Lorenzo Way bridge in the public right-of-way to tie-in to the existing water line at Farmer Street; and
- Upgrades and improvements to the Kirby Water Treatment Plant in Felton.

### **CONJUNCTIVE USE PLAN SCENARIO NOT EVALUATED IN THIS IS-MND**

#### ***ASR Scenario***<sup>6</sup>

North System Operates ASR Project Using North and Felton System Unused Potential Diversions, and Reduces *Baseflow* Diversions from North System

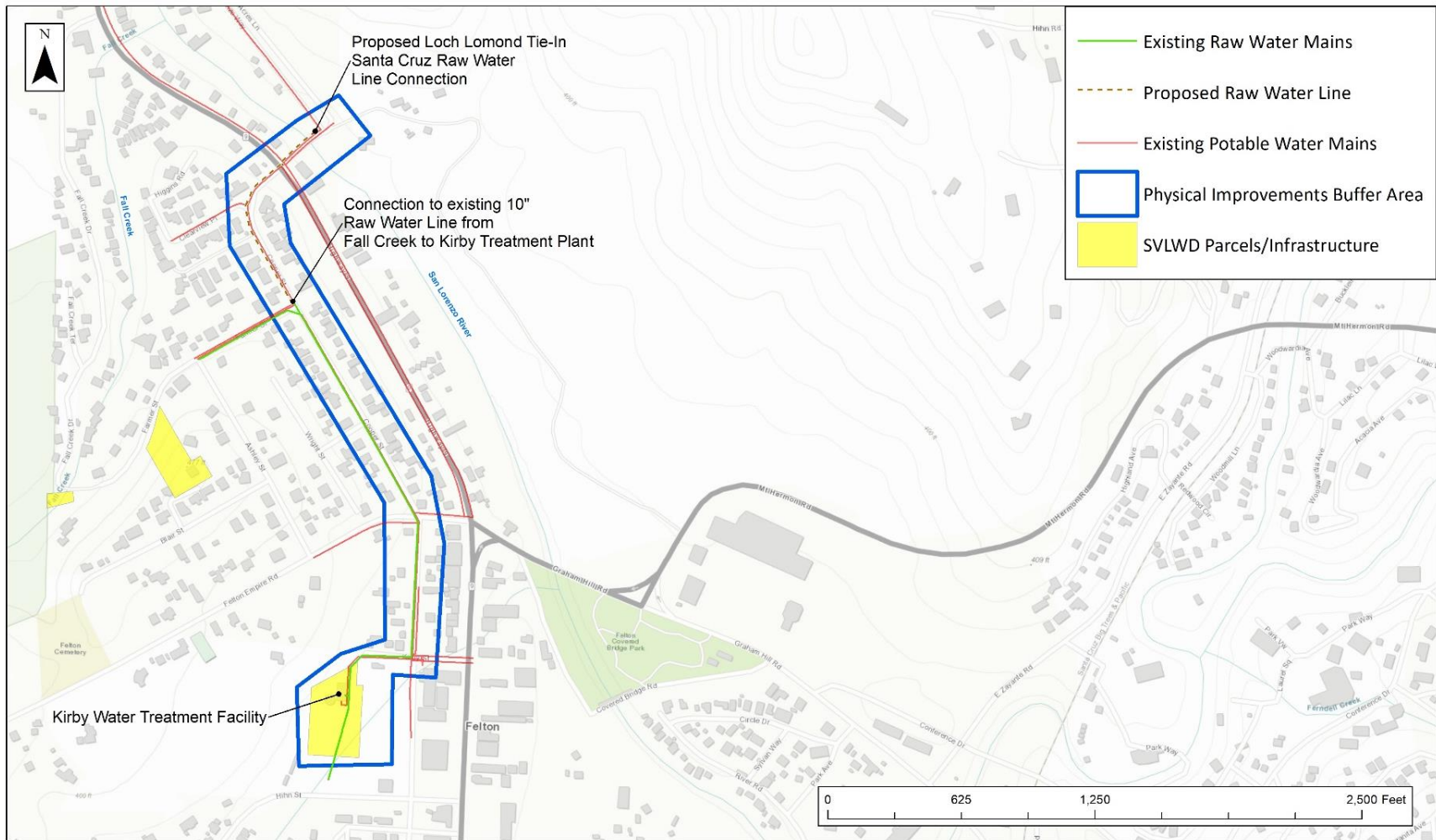
The WAA analyzed three scenarios that would increase storage in, and yield from, the Olympia wellfield in the North System through operation of a hypothetical aquifer storage and recovery (ASR) project supplied by available surface water in excess of monthly water demand during wet flow season (December through May). As analyzed in the WAA, all three scenarios assume that the yield from such an ASR project would be used to offset groundwater pumping from the North System (Olympia and Quail Hollow wells), thereby increasing drought minimum baseflows in lower Newell, Zayante, and Bean creeks by up to 33 percent (Exponent 2019). A modified ASR scenario was identified in the Fisheries Resource Considerations document, utilizing a portion of the simulated ASR storage recovery supply to offset surface water diversions for fisheries enhancements (Podlech 2019). Under the ASR Scenario, the injection and recovery of currently unused potential North and Felton systems diversions in an ASR project would be used to offset the amount of groundwater otherwise withdrawn at the Olympia wells to meet North system summer demand.

Because the location, size, and operational details of new infrastructure required for implementation of the ASR Scenario are unknown at this time, the environmental effects of this scenario would be speculative and are therefore not evaluated in this IS-MND. Implementation of the ASR Scenario has independent utility from the other three scenarios evaluated in this IS-MND, and it could be implemented with or without the other scenarios. Similarly, the other three scenarios can be implemented with or without the ASR Scenario. If the ASR Scenario is separately considered for approval, it will be subject to its own CEQA review.

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<sup>6</sup> The ASR Scenario is named "Scenario 3d" in the Fisheries Resource Considerations and Conjunctive Use Plan documents. It has been renamed in this IS-MND document for clarification and ease of reading.

**Figure 4 Loch Lomond Scenario New Infrastructure**



## Construction

The SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not involve construction activities, as no new infrastructure is proposed under these scenarios.

The Loch Lomond Scenario would require the installation of new infrastructure including installation of a new connection between the Newell Creek pipeline and Felton raw water system, approximately 250 linear feet (LF) of new suspended raw water pipeline, approximately 1,350 LF of new underground raw water pipeline, and upgrades to the Kirby Water Treatment Plant. Figure 4 shows the locations of proposed infrastructure associated with the Loch Lomond Scenario.

Construction activities would include excavating up to a maximum depth of four feet to install the proposed infrastructure. Approximately 283 cubic yards (cy) of soil would be imported and approximately 300 cy of excavated soil would be exported from the construction area. Construction and demolition debris would be disposed of at the Buena Vista Landfill, located approximately 21 miles from the Loch Lomond Scenario improvements area.

Construction is anticipated to occur from approximately April 2024 through December 2025. Construction activities would occur during the working hours of 8:00 a.m. to 6:00 p.m. Monday through Friday. No construction activities would occur on weekends or federal holidays. Temporary staging of construction equipment and materials would occur at the Kirby Water Treatment Plant.

### *Connection Between Newell Creek Pipeline and Felton Raw Water System*

Under the Loch Lomond Scenario, a new connection would be installed between the Newell Creek pipeline (owned and operated by the City of Santa Cruz) and the Felton raw water system. The connection would be located on the west side of the San Lorenzo Way bridge, approximately 0.4 mile north of the Highway 9 and Graham Hill Road intersection in Felton.

Connection installation would entail approximately 3,375 square feet of excavation within the public roadway and would require approximately 20 days to complete. No roadblocks are proposed. Standard one-way traffic controls would be implemented during normal daily construction. There would be no road closures during construction.

### *Suspended Pipeline Under San Lorenzo Way Bridge*

Under the Loch Lomond Scenario, approximately 250 LF of new raw water pipeline would be installed across the San Lorenzo River and San Lorenzo Way. An existing one-lane bridge in this location is planned for replacement by the County of Santa Cruz under a separate project, the environmental effects of which were analyzed in the 2014 San Lorenzo Way Bridge Replacement Project IS-MND (County of Santa Cruz 2014) and the environmental permits for which were obtained. The District intends to suspend the new pipeline from the underside of the new bridge, within the bridge development footprint. Construction of the new suspended pipeline would require 15 days to complete and would be constructed as part of the bridge replacement project. No roadblocks are proposed. Standard one-way traffic controls would be implemented during normal daily construction.

### *Trenched Pipeline from San Lorenzo Way Bridge to Farmer Street*

Under the Loch Lomond Scenario, approximately 1,350 LF of new raw water pipeline would be installed underground from the new San Lorenzo Way bridge to an existing raw water pipeline on

**Conjunctive Use Plan for the San Lorenzo River Watershed**

Cooper Street. The proposed pipeline would run west from the San Lorenzo Way bridge, under Highway 9, along Clearview Place and south along Cooper Street. The new waterline would then run south within the Cooper Street right-of-way to tie-in to the existing water line at Farmer Street.

Construction of the new pipeline would entail conventional, open trench construction within the existing paved roadway. Open-trench excavation is a construction method typically utilized to install pipelines and their appurtenant structures, which include blow-offs, service meters, valves, and vaults. In general, the process consists of site preparation, excavation and shoring, pipe installation and backfilling, and street restoration. Construction usually progresses along the alignment with the maximum length of open trench at one time being approximately 300 feet in length.

Construction of the new underground pipeline would require four weeks to complete. No roadblocks are proposed. Standard one-way traffic controls would be implemented during normal daily construction.

*Upgrades to Kirby Water Treatment Plant*

Under the Loch Lomond Scenario, upgrades and improvements would be made to the existing Kirby Water Treatment Plant in Felton, including installation of the following equipment:

- A 90,000-gallon blending tank;
- A 3,000-gallon waste tank;
- Post-filtration granular activated carbon (GAC) absorption equipment; and
- Magnetic ion exchange (MIEX) filtration equipment.

All improvements would occur within the footprint of the existing treatment plant building. The proposed improvements would not increase the maximum capacity of the existing water treatment facility.

**Operation**

Upon completion of construction of new infrastructure associated with the Loch Lomond Scenario, all three scenarios would rely on built infrastructure and existing staff resources. No new employees would be required, and the new infrastructure would not require additional operations and maintenance (O&M) vehicle trips as compared to existing conditions.

The proposed conjunctive use scenarios would require approximately 66 megawatt-hours (MWh) of electricity annually to operate due to increased pumping needs.

The following sections describe the proposed operational changes under each scenario:

*SLRBT Low-Flow Requirements Modification Scenario*

Under the SLRBT Low-Flow Requirements Modification Scenario, Fall Creek bypass flows would continue to comply with the current permit requirements, but SLVWD's water right permit modification would seek to relieve it of the SLRBT low-flow requirements that at times can prohibit all diversions for the Felton System. The District's bypass flow requirements on Fall Creek would continue to ensure that proportionally appropriate contributions of Fall Creek flows to the mainstem would be protected during summer baseflow conditions.

Based on water supply simulations conducted in the WAA, the SLRBT Low-Flow Requirements Modification Scenario would reduce, but not eliminate, the Felton system's unfulfilled water

demand to an average of 35 AFY and a maximum of 85 AFY due to the lack of a supplemental source of water during deficit months (Exponent 2019). Under the SLRBT Low-Flow Requirements Modification Scenario, the percentage of minimum flow remaining below the Fall Creek diversion is simulated to increase from 32 percent to 49 percent (Exponent 2019).

#### *North System Diversions Scenario*

Under the North System Diversions Scenario, SLVWD would export unused potential diversions from the North System to the South System as a substitute for pumping groundwater from the Pasatiempo groundwater wells. The WAA defines the term “unused potential diversions” as potential diversions within existing water rights, available flows, and diversion capacities that exceed demand within the service area within which they are diverted, but which potentially could be transferred to another system within the District’s service area (Exponent 2019). Based on the results of the WAA, an average of 115 AFY and a maximum of 300 AFY would be transferred to the South System, as needed, to fulfill demand during months when potential diversions exceed North System demand (Exponent 2019). Implementation of this conjunctive use scenario is estimated to result in an overall 32 percent reduction in South System groundwater pumping.

The 32 percent reduction in South System groundwater pumping simulated for the North System Diversions Scenario is estimated to increase the percentage of drought baseflow remaining as a result of assumed groundwater pumping effects by four percent in Bean Creek at the Zayante Creek confluence, three percent in Zayante Creek at the San Lorenzo River confluence, and one percent in the San Lorenzo River at SLRBT compared to existing baseline conditions. These estimated increases in drought baseflows are modest (approximately 0.1 cubic feet per second [cfs]) but biologically relevant during the most critically low flow years in these tributaries, where low summer stream flows are considered a primary factor limiting salmonid fish habitat even in non-drought years (Podlech 2019).

#### *Loch Lomond Scenario*

Under the Loch Lomond Scenario, the South System would import an average of 245 AFY from Loch Lomond Reservoir, ranging between 120 and 290 AFY. The South System’s use of Loch Lomond Reservoir water would result in a simulated 67 percent reduction in groundwater pumping from the Pasatiempo wells. This in turn would result in an estimated eight percent increase in drought minimum baseflows remaining in Bean Creek at the Zayante Creek confluence and a seven percent increase in drought minimum baseflows in Zayante Creek at the San Lorenzo River confluence, equivalent to a drought baseflow increase of approximately 0.15 cfs in both streams. The mainstem San Lorenzo River at SLRBT would receive a three percent (0.2 cfs) increase in drought baseflow levels (Podlech 2019).

Under the Loch Lomond Scenario, the North System would also import an average of 4 AFY of Loch Lomond Reservoir water and the Felton System would import an average of 50 AFY to help meet unmet demand in those systems.

### **Project Design Features**

The following construction noise control measures have been incorporated into the Loch Lomond Scenario as Project Design Features:

- **Construction Staging Areas and Stationary Equipment Locations.** The contractor shall select equipment staging areas and stationary noise-generating construction equipment locations as far as practicable from sensitive receptors.
- **Equipment Maintenance.** All contractors, as a condition of contract, shall be required to maintain and tune-up all construction equipment to minimize noise emissions.
- **Idling Prohibition and Enforcement.** Unnecessary idling of internal combustion engines shall be prohibited. In practice, this would mean turning off equipment if it would not be used for five or more minutes.
- **Stationary Equipment Shielding.** Stationary equipment areas with appropriate acoustic shielding shall be designated on building and grading plans. Equipment and shielding shall be installed prior to construction and remain in designated location throughout construction activities. Pneumatic impact tools and equipment used at the construction site shall have intake and exhaust mufflers recommended by the manufacturers. Impact noise producing equipment (i.e., jackhammers and pavement breaker[s]) shall be equipped with noise attenuating shields, shrouds, or portable barriers or enclosures to reduce operating noise.
- **Mufflers.** All diesel equipment shall be operated with closed engine doors and shall be equipped with properly operating and maintained residential grade mufflers.
- **Electrically-Powered Tools and Facilities.** Whenever feasible, electrical power shall be used to run air compressors and similar power tools rather than diesel equipment.
- **Pre-Construction Notification.** Prior to construction, written notification that identifies the type, duration, and frequency of construction activities shall be provided to residents within 100 feet of the Clearview Place and Cooper Street raw water pipeline locations.

## 9. Surrounding Land Uses and Setting

The San Lorenzo River watershed sits in both rural, semi-rural, and urban land uses. It predominately occurs within upland and riparian redwood forest, developed redwood forest, landscaped areas, rural communities, and paved roadways.

Land uses surrounding the SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario consist of forestland, residential, and paved roads. Land uses around the Loch Lomond Scenario physical improvements are predominantly residential with paved roads. Additionally, areas where infrastructure improvements are proposed consist of the San Lorenzo River, developed roads, and the existing Kirby Water Treatment Plant, with developed redwood forest occurring in the surrounding area.

### **Analysis Baseline**

CEQA Guidelines Section 15125(a) defines the environmental setting of a project as being “the physical environmental conditions in the vicinity of the project.” This setting “will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.” Section 15125(a)(1) states that “Generally, the lead agency should describe physical environmental conditions as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced.” However, “where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible for the project’s impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes

operational, or both” as long as this decision is supported by substantial evidence [CEQA Guidelines Section 15125(a)(1)]. As such, a lead agency has the discretion to use a baseline other than existing conditions at the time environmental analysis is commenced.

The physical environmental conditions at the time this analysis commenced (January 2021) include extensive fire damage caused by the CZU Lightning Complex fires. As discussed previously, the fires burned portions of the Conjunctive Use Plan area, damaging or destroying intake lines, approximately seven miles of distribution piping, over 30 storage and/or settling tanks, and four surface water intakes. Infrastructure utilized by the conjunctive use scenarios, including surface water intakes at Foreman Creek, Peavine, Clear Creek, and Sweetwater Creek, were also destroyed, as was vegetation and structures throughout the plan area.

While the current environmental conditions include damage from the CZU Lightning Complex fires, the baseline for this Initial Study reflects the condition of SLVWD water supply infrastructure prior to the fires, most of which was installed between approximately 1985 and 1990. These facilities were in continual use for over 30 years. The development of the conjunctive use scenarios began in 2019, when SLVWD conducted technical evaluations to analyze a wide range of alternative scenarios. Both the *WAA* and *Fisheries Resource Considerations* studies were prepared in 2019, prior to the CZU Lightning Complex Fire. The RFP for this Initial Study was initially planned to be issued in late summer 2020 but was delayed due to the fires and ultimately released in October 2020. The development of the plan and initiation of the CEQA process therefore occurred prior to the start of the fires.

Although infrastructure that would be utilized by the conjunctive use scenarios was destroyed and/or damaged in the CZU Lightning Complex fires, the lack of this infrastructure is temporary. The District repaired the Foreman Creek intake between September 2020 and January 2021 and intends to replace the remaining infrastructure within three to five years of completion of a Constructability Study, for which an RFP was released in May 2020.<sup>7</sup> All of these actions are taking place independently of this project and are intended to restore the District’s operations to normal, as such operations existed prior to the CZU Lightning Complex fires. Thus, reliance on an existing conditions baseline would be misleading to both decisionmakers and the public because it would not account for the replacement of the infrastructure damaged in the CZU Lightning Complex fires.

Because the conjunctive use planning process began prior to the start of the fires and because the lack of infrastructure is both atypical and temporary, the District believes that the pre-fire condition reflects the appropriate baseline for environmental review and provides both the public and decision makers the most accurate and understandable picture of the plan’s anticipated environmental impacts. For these reasons, pre-fire conditions are justified as the analysis baseline.

## 10. Other Public Agencies Whose Approval is Required

SLVWD is the lead agency under CEQA with responsibility for approving the project. Table 1 lists the other approvals potentially required for the project.

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<sup>7</sup> Although the conjunctive use plan proposes to utilize the replaced infrastructure, the project scenarios can also be implemented without it. The reestablished Foreman Creek intake and pipelines can provide conjunctive use opportunities. Plans to reestablish the Peavine Intake and pipeline will occur in fiscal year 2021/2022. This reestablishment will occur with or without the project; however, once reestablished, it will allow for further conjunctive use opportunities. Replacement of the infrastructure that was damaged and/or destroyed in the CZU Lightning Complex fires is planned to support the District’s current operations, regardless of whether this project proceeds. Similarly, this project can proceed absent the replacement of this infrastructure and/or without use of the replaced infrastructure. As such, the conjunctive use plan and the replacement of the fire-damaged infrastructure have independent utility from each other and are considered separate projects for the purpose of CEQA. The infrastructure replacement is therefore not analyzed in this IS-MND.

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**Table 1 Summary of Potentially Required Approvals**

<b>Regulating Agency</b>	<b>Potential Permit/Approval</b>	<b>Reason for Permit/Approval</b>
State Water Resources Control Board	Petitions for Change	Petition for Change in terms or conditions to remove low flow permit restrictions on the SLRBT under the SLRBT Low-Flow Requirements Modification Scenario.
Central Coast Regional Quality Control Board	National Pollutant Discharge Elimination System (NPDES) Stormwater Construction General Permit	Construction activities resulting in ground disturbance exceeding one acre
County of Santa Cruz	Encroachment Permit	Project construction within County right-of-way
California Department of Transportation (Caltrans)	Encroachment Permit	Project construction within Caltrans right-of-way



## Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is “Potentially Significant” or “Less than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Aesthetics                      | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality                                   |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Energy  |
| <input type="checkbox"/> Geology/Soils                   | <input type="checkbox"/> Greenhouse Gas Emissions           | <input checked="" type="checkbox"/> Hazards & Hazardous Materials      |
| <input type="checkbox"/> Hydrology/Water Quality         | <input type="checkbox"/> Land Use/Planning                  | <input type="checkbox"/> Mineral Resources                             |
| <input type="checkbox"/> Noise                           | <input type="checkbox"/> Population/Housing                 | <input type="checkbox"/> Public Services                               |
| <input type="checkbox"/> Recreation                      | <input checked="" type="checkbox"/> Transportation          | <input checked="" type="checkbox"/> Tribal Cultural Resources          |
| <input type="checkbox"/> Utilities/Service Systems       | <input type="checkbox"/> Wildfire                           | <input checked="" type="checkbox"/> Mandatory Findings of Significance |


## Determination

Based on 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 to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- 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 “less than significant with mitigation incorporated” 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.

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- I find that although the proposed project could have a significant effect on the environment, because all potential 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.

  
\_\_\_\_\_  
Signature

7/27/21  
\_\_\_\_\_  
Date

Carly Blanchard  
\_\_\_\_\_  
Printed Name

Environmental Programs Manager  
\_\_\_\_\_  
Title

# Environmental Checklist

## 1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Except as provided in Public Resources Code Section 21099, would the project:

a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. 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 a 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a. *Would the project have a substantial adverse effect on a scenic vista?*

Existing water infrastructure associated with the SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario is located throughout the District's service area in Santa Cruz County. Neither scenario proposes new or modified infrastructure. The physical improvements proposed under the Loch Lomond Scenario would be located in the community of Felton, California.

Infrastructure improvements associated with the Loch Lomond Scenario would occur under the San Lorenzo Way Bridge and the Kirby Water Treatment Plant in Felton. This scenario's location is surrounded by residential and commercial uses. As discussed above in *Project Description*, improvements proposed under this scenario would occur primarily within a neighborhood designated Suburban Residential (SR) by the Santa Cruz County General Plan (GP). The Conservation and Open Space Element of the County of Santa Cruz GP/Local Coastal Program (LCP) identifies visual resources as vistas from designated scenic roads, Coastal Special Scenic Areas, ocean views, agricultural fields, wooded forests, open meadows, mountain hillside views, and unique hydrologic,

geologic, and paleontological features. The Conservation and Open Space Element also includes scenic protection policies for preserving open beaches and bluffs and significant trees. The only scenic road designated by the GP/LCP in the vicinity of the Loch Lomond Scenario is Highway 9 (County of Santa Cruz 1994). No mapped scenic resources are located on or near the proposed construction areas (County of Santa Cruz 2019). However, Highway 9, which is a designated scenic road according to the GP/LCP, runs alongside or near the Loch Lomond Scenario improvements. Vistas from Highway 9 near the Loch Lomond Scenario locations consist primarily of redwood forest and mixed forest woodland hillsides. Although Highway 9 also runs alongside the San Lorenzo Way Bridge and the entrance to Kirby Street, intervening topography, mature woodlands, and existing development obstruct views of the Loch Lomond Scenario physical improvement areas from the road.

Staging of construction equipment and materials would occur at the existing Kirby Water Treatment Plant, and would not impair scenic views. Once construction is complete, the Loch Lomond Scenario would not result in permanent aesthetic changes that would alter scenic vistas from their existing conditions because new infrastructure would be located underground and suspended from an existing bridge footprint. Therefore, the Loch Lomond Scenario would not interrupt or impede a scenic vista. In addition, no trees would be removed due to construction of the scenario, and any damaged features, including vegetation and roadway pavement, would be restored to pre-construction condition or better. Therefore, impacts to scenic vistas would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

- b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

There are no officially designated State Scenic Highways in the vicinity of the conjunctive use scenarios physical improvement areas. Highway 9, which runs adjacent to the Loch Lomond Scenario location, is eligible for designation as a State Scenic Highway but is not officially designated by the California Department of Transportation (Caltrans 2018). Although Highway 9 is not designated State Scenic Highway, as noted above, this highway has been identified as a Scenic Road in the Conservation and Open Space Element of the County of Santa Cruz GP/LCP (County of Santa Cruz 1994).

Construction of the Loch Lomond Scenario could temporarily impair views of scenic resources from Highway 9 by staging and operating construction equipment in the immediate field of view. Upon completion of construction, the Loch Lomond Scenario would not be visible near Highway 9 because the pipeline would be constructed underground or suspended from a bridge. No aspect of any conjunctive use scenario would impact scenic resources, including trees, rock outcroppings or historic buildings.

In summary, the proposed Conjunctive Use Plan would not impact scenic resources within an officially designed State Scenic Highway. There would be no impact.

#### **NO 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 a 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?*

The proposed Conjunctive Use Plan occurs mainly in rural areas with portions in urban areas of Felton. Construction under the proposed Loch Lomond Scenario would be visible from surrounding land uses and would temporarily alter the existing visual character and quality of the scenario area and vicinity. The visual character of the area in which scenario improvements would be constructed consists of redwood forest, mixed woodlands, paved roadways, rural and suburban residential neighborhoods, and low-intensity commercial development.

A temporary change in visual character would result from the presence of construction equipment and material, stockpiles of soil, and construction vehicles during laydown of the pipeline, but this change would end once construction of the Loch Lomond Scenario is complete. Because the proposed project involves installation of a linear pipeline, the active construction area would be continuously moving along the length of the alignment as each segment is installed. As such, the active construction area would not typically be in the same location for more than five days. Thus, the alteration of visual character and quality from pipeline construction would be temporary, short-term, and not substantial.

The proposed physical infrastructure facilities associated with the proposed conjunctive use scenarios would not substantially alter the visual character and quality of the site in the long-term. During construction, equipment would temporarily degrade the views of the surrounding semi-rural residential neighborhood; however, once construction is completed, the views would return to the pre-construction state. After construction is completed, the visual characteristics of the Kirby Water Treatment Plant would remain unchanged as infrastructure upgrades and improvements would occur within the footprint of the existing building. At the San Lorenzo Way Bridge, construction would degrade the views, but only temporarily as new raw pipeline would be suspended from the proposed bridge. The visual impacts of the proposed San Lorenzo Way Bridge replacement were analyzed in the 2014 San Lorenzo Way Bridge Replacement Project IS-MND (County of Santa Cruz 2014).

Based on the above analysis, the Loch Lomond Scenario would not substantially impact the visual character and quality of the area because infrastructure improvements would occur within the footprint of existing infrastructure and underground. Impacts would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

- d. *Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?*

The conjunctive use plan area is largely rural and contains limited nighttime lighting. The areas surrounding the Loch Lomond Scenario consist of semi-rural and urban land uses that include existing streetlights and residential lighting. The Kirby Water Treatment Plant also includes minimal exterior lighting. The SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not result in new or changed light or glare sources as no new infrastructure is proposed under either scenario. The proposed physical improvements under the Loch Lomond Scenario would be underground and within the footprint of existing infrastructure including the San Lorenzo Way Bridge and Kirby Water Treatment Plant. Construction would occur

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during the daytime hours, Monday through Friday from 8:00 a.m. to 6:00 p.m. The associated scenario upgrades would not include any light sources and would be constructed of non-reflective material, or be entirely underground. In summary, the proposed Conjunctive Use Plan would not create a new source of permanent substantial light or glare that would adversely affect daytime or nighttime views in the vicinity of the site. Therefore, impacts related to light and glare would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

## 2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Would the project:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. 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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a. *Would the project convert Prime Farmland, Unique Farmland, 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 non-agricultural use?*

According to the California Department of Conservation’s (DOC) Farmland Mapping and Monitoring Program (FMMP) the physical improvements area associated with the Loch Lomond Scenario is not on or near land mapped as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance under the (DOC 2017). As such, the Loch Lomond Scenario would not convert Farmland to a non-agricultural use. In addition, the SLRBT Low-Flow Requirements Modification Scenario and North System Diversions Scenario would not introduce new infrastructure or change land uses at the existing diversion facilities. No impact would occur.

**NO IMPACT**

- b. *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?*

The Loch Lomond Scenario physical improvements area is not on land enrolled under the Williamson Act and would not result in a loss of Williamson Act land. The Loch Lomond Scenario involves physical improvements at the existing Kirby Water Treatment Plant, which is zoned Agricultural (A), although it does not currently support agricultural land uses. All improvements would occur within the footprint of the existing treatment plant building and would not change the existing land use. As such, the Loch Lomond Scenario would not conflict with existing zoning for agricultural use or a Williamson Act contract.

In addition, the SLRBT Low-Flow Requirements Modification Scenario and North System Diversions Scenario would not introduce new infrastructure or change land uses at the existing diversion facilities. No impact would occur.

**NO IMPACT**

- 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))?*

The physical improvements area associated with the Loch Lomond Scenario is not designated or zoned for forest land, timberland, or timberland zoned Timberland Production. Therefore, implementation of the Loch Lomond Scenario would not convert any forest land to non-forest use, nor would it conflict with existing zoning for such lands.

In addition, the SLRBT Low-Flow Requirements Modification Scenario and North System Diversions Scenario would not introduce new infrastructure or change land uses at the existing diversion facilities. No impact would occur.

**NO IMPACT**

- d. *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

The physical improvements area associated with the Loch Lomond Scenario is not currently in use as forest land. Therefore, implementation of the Loch Lomond Scenario would not convert any forest land to non-forest use.

In addition, the SLRBT Low-Flow Requirements Modification Scenario and North System Diversions Scenario would not introduce new infrastructure or change land uses at the existing diversion facilities. No impact would occur.

**NO IMPACT**

- 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?*

According to the California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP) the physical improvements area associated with the Loch Lomond Scenario is not on or near land mapped as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance under the (DOC 2017). The Loch Lomond Scenario involves physical improvements at the existing Kirby Water Treatment Plant, which is zoned Agricultural (A), although it does not currently support agricultural land uses. All improvements would occur within the footprint of the existing treatment plant building and would not change the existing land use. As such, the Loch Lomond Scenario



would not involve changes to the existing environment that could result in conversion of Farmland to a non-agricultural use.

In addition, the SLRBT Low-Flow Requirements Modification Scenario and North System Diversions Scenario would not introduce new infrastructure or change land uses at the existing diversion facilities. No impact would occur.

**NO IMPACT**

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### 3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### Overview of Air Pollution

The federal and State Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants. Under these laws, the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for “criteria pollutants” and other pollutants. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere, including carbon monoxide, volatile organic compounds (VOC)/reactive organic gases (ROG)<sup>8</sup>, nitrogen oxides (NO<sub>x</sub>), particulate matter with diameters of ten microns or less (PM<sub>10</sub>) and 2.5 microns or less (PM<sub>2.5</sub>), sulfur dioxide, and lead. Other pollutants are created indirectly through chemical reactions in the atmosphere, such as ozone, which is created by atmospheric chemical and photochemical reactions primarily between ROG and NO<sub>x</sub>. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog).

Air pollutant emissions are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories:

- Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat.

<sup>8</sup> CARB defines VOC and ROG similarly as, “any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate,” with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term ROG is used in this IS-MND.

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- Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products.

Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and can also be divided into two major subcategories:

- On-road sources that may be legally operated on roadways and highways.
- Off-road sources include aircraft, ships, trains, and self-propelled construction equipment.

Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

### **Air Quality Standards and Attainment**

The plan area is within the North Central Coast Air Basin (NCCAB), which consists of Monterey, Santa Cruz, and San Benito counties and forms an area of more than 5,100 square miles (Monterey Bay Air Resources District [MBARD] 2008). The NCCAB is under the regulatory jurisdiction of MBARD, which is the local air quality management agency that is required to monitor air pollutant levels to ensure that National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are met and, if they are not met, to develop strategies to meet the standards.

Depending on whether the standards are met or exceeded, the NCCAB is classified as being in “attainment” or “nonattainment” for a particular air pollutant. MBARD’s 2016 Air Quality Management Plan (AQMP) assesses the attainment status of the NCCAB. The NAAQS and CAAQS attainment statuses for the NCCAB are listed in Table 2. As shown in the table, the NCCAB is in nonattainment only for the state standards for eight-hour ozone (O<sub>3</sub>) and particulate matter 10 microns in diameter or less in size (PM<sub>10</sub>; MBARD 2017). The NCCAB is in attainment or unclassified for all other state and federal ambient air quality standards.

**Table 2 North Central Coast Air Basin Attainment Status**

Pollutant	Standard	Designation
1-Hour Ozone	NAAQS	Attainment
	CAAQS	Attainment
8-Hour Ozone	NAAQS	Attainment
	CAAQS	<b>Nonattainment</b>
CO	NAAQS	Attainment
	CAAQS	Attainment/Unclassified <sup>1</sup>
NO <sub>2</sub>	NAAQS	Attainment
	CAAQS	Attainment
SO <sub>2</sub>	NAAQS	Attainment
	CAAQS	Attainment
PM <sub>10</sub>	NAAQS	Attainment
	CAAQS	<b>Nonattainment</b>
PM <sub>2.5</sub>	NAAQS	Attainment
	CAAQS	Attainment
Lead	NAAQS	Attainment
	CAAQS	Attainment

NAAQS: National Ambient Air Quality Standards; CAAQS: California Ambient Air Quality Standards; CO: carbon monoxide; PM<sub>10</sub>: particulate matter 10 microns in diameter or less in size; PM<sub>2.5</sub>: particulate matter 2.5 microns in diameter or less in size; NO<sub>2</sub>: nitrogen dioxide; SO<sub>2</sub>: sulfur dioxide

<sup>1</sup> Monterey County is classified as in Attainment and San Benito and Santa Cruz counties are listed as Unclassified.

Source: MBARD 2017

## Air Quality Management

Under California law, MBARD is required to prepare a plan for air quality improvement for pollutants for which MBARD is in non-compliance. In March 2017, MBARD adopted the *2012-2015 Air Quality Management Plan (2016 AQMP)*, which assesses and updates elements of the 2012 AQMP, including the air quality trends analysis, emission inventory, and mobile source programs. The 2016 AQMP addresses ways in which MBARD can achieve attainment of the state 8-hour ozone standard in the NCCAB. In 2012, the United States Environmental Protection Agency designated the NCCAB as in attainment for the current national 8-hour ozone standard of 0.075 parts per million (ppm). In October 2015, the national standard was reduced to 0.070 ppm. However, the NCCAB continues to be in attainment with the federal ozone standard (MBARD 2017).

## Air Emission Thresholds

MBARD has issued criteria for determining the level of significance for project-specific impacts within its jurisdiction in accordance with the NAAQS and CAAQS.

### Construction

Based on criteria set forth in the MBARD's *CEQA Air Quality Guidelines* (MBARD 2008), construction projects using typical construction equipment (e.g., dump trucks, scrapers, bulldozers, compactors, and front-end loaders) are already accommodated in the emission inventories of state- and federally-required air plans, and therefore would not have a significant impact related to precursors of ozone (volatile organic compounds [VOC] and oxides of nitrogen [NO<sub>x</sub>]). Construction activities (e.g., excavation, grading, on-site vehicles) which directly generate 82 pounds per day or more of

PM<sub>10</sub> would have a significant impact on local air quality when they are located nearby and upwind of sensitive receptors. Sensitive receptors typically include residences, schools, healthcare facilities, and other live-in housing facilities such as prisons or dormitories.

MBARD’s *CEQA Air Quality Guidelines* also identify screening thresholds for the evaluation of PM<sub>10</sub> emissions. Construction projects with less than 8.1 acres per day of minimal earthmoving or 2.2 acres per day of earthmoving (grading, excavation) are assumed to be below the PM<sub>10</sub> threshold of 82 pounds per day (MBARD 2008).

*Operation*

MBARD’s *CEQA Air Quality Guidelines* identifies quantitative operational thresholds for VOC and NO<sub>x</sub>, carbon monoxide (CO), oxides of sulfur (SO<sub>x</sub>), and PM<sub>10</sub>. The plan’s impacts on criteria air pollution would be significant if the plan would be inconsistent with the adopted AQMP or would result in air pollutant emissions during construction or operation that exceed the thresholds in Table 3.

**Table 3 Criteria Pollutant Thresholds of Significance**

Pollutant/Precursor	Maximum Construction Emissions (lbs/day)	Maximum Operational Emissions (lbs/day)
VOC/NO <sub>x</sub>	n/a	137
CO	n/a	550
SO <sub>x</sub>	n/a	150
PM <sub>10</sub>	82 <sup>1</sup>	82

lbs/day = pounds per day; CO = carbon monoxide; NO<sub>x</sub> = oxides of nitrogen; SO<sub>x</sub> = oxides of sulfur; PM<sub>10</sub> = particulate matter with a diameter of 10 microns or less; VOC = volatile organic compounds (also referred to as reactive organic gases [ROG]).

<sup>1</sup> This threshold only applies if construction is located nearby or upwind of sensitive receptors. In addition, a significant air quality impact related to PM<sub>10</sub> emissions may occur if a project uses equipment that is not “typical construction equipment” as specified in Section 5.3 of the MBARD’s *CEQA Air Quality Guidelines*.

Source: MBARD 2008

**Regulatory Setting**

*Federal Regulations*

**FEDERAL CLEAN AIR ACT**

The USEPA is charged with implementing national air quality programs. USEPA’s air quality mandates are drawn primarily from the federal Clean Air Act (CAA), passed in 1963 by the U.S. Congress and amended several times. The 1970 federal CAA amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including non-attainment requirements for areas not meeting NAAQS and the Prevention of Significant Deterioration program. The 1990 federal CAA amendments represent the latest in a series of federal efforts to regulate air quality in the United States.

## **NATIONAL AMBIENT AIR QUALITY STANDARDS**

The federal CAA requires USEPA to establish primary and secondary NAAQS for several criteria air pollutants. The air pollutants for which standards have been established are considered the most prevalent air pollutants known to be hazardous to human health. NAAQS have been established for ozone, CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and Pb.

### *State Regulations*

## **CALIFORNIA CLEAN AIR ACT**

The California CAA, signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practical date. CARB is the State air pollution control agency and is a part of CalEPA. CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California, and for implementing the requirements of the California CAA. CARB oversees local district compliance with federal and California laws, approves local air quality plans, submits the State implementation plans to the USEPA, monitors air quality, determines and updates area designations and maps, and sets emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

## **CALIFORNIA AMBIENT AIR QUALITY STANDARDS**

The California CAA requires CARB to establish ambient air quality standards for California, known as CAAQS. Similar to the NAAQS, CAAQS have been established for criteria pollutants and standards are established for vinyl chloride, hydrogen sulfide, sulfates, and visibility-reducing particulates. In general, the CAAQS are more stringent than the NAAQS on criteria pollutants. The California CAA requires all local air districts to endeavor to achieve and maintain the CAAQS by the earliest practical date. The California CAA specifies that local air districts focus attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources.

## **Methodology**

Emissions for construction of the infrastructure associated with the Loch Lomond Scenario were estimated in Road Construction Emissions Model (RCEM) Version 9.0.0 from the Sacramento Metropolitan Air Quality Management District. The RCEM model was used for the infrastructure improvements because it was designed specifically for linear construction projects. The modeling outputs are included in Appendix D of this document. Emissions from the SLRBT Low-Flow Requirements Modification Scenario and the North Systems Diversions Scenario were not modeled because there would be no physical improvements associated with the implementation of these scenarios.

It was assumed construction activities associated with the Loch Lomond Scenario would comply with applicable regulatory standards. This would include watering twice daily, a 12 percent unpaved road moisture content, and a 15-mph speed limit on any unpaved roads. In addition, construction equipment was assumed to be a minimum Tier 2 equipment. RCEM does not allow for specifying Tier 2 or Tier 3 equipment thus, "Model Default Tier" was selected which is based upon current regulations and is assumed to be a mix of tiers based on CARB's database.

Operational emissions from the plan would be negligible as additional pumping and operational activities would be similar to current operation and maintenance activities. Therefore, operational emissions were not modeled.

## **Impact Analysis**

*a. Would the project conflict with or obstruct implementation of the applicable air quality plan?*

The most recently adopted air quality plan is the 2016 AQMP (MBARD 2016). A project may be inconsistent with the AQMP if it would generate population growth exceeding the forecasts used in the development of the AQMP. The conjunctive use scenarios do not include new housing or businesses, nor would operation and maintenance of the scenarios require new employees. Therefore, the Loch Lomond Scenario would not directly result in population growth. As discussed in Section 14, *Population and Housing*, the proposed conjunctive use scenarios would not induce population growth directly or indirectly. The plan would improve aquatic habitat and water supply reliability, to meet the needs of the District and its rate payers. The MBARD *CEQA Air Quality Guidelines* (2008) states that indirect emissions from a proposed non-residential project intended to meet the needs of the population are consistent with the AQMP if the current population of the county does not exceed the AQMP population forecasts. The current population of Santa Cruz County is estimated at 271,233, and according to the Association of Monterey Bay Area Governments (AMBAG), the population of Santa Cruz County is forecast to reach 308,582 by 2035 (California Department of Finance 2020; AMBAG 2014). The plan would not directly or indirectly induce population growth above that anticipated by the AQMP and would not conflict with or obstruct implementation of the AQMP. No impact would occur.

### **NO IMPACT**

*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?*

#### *Construction*

The Loch Lomond Scenario would result in temporary construction emissions. The construction activities were categorized into four main activities: demolition, site preparation, construction, and paving. These phases were modeled for the Loch Lomond Scenario and would have the potential to generate fugitive dust (PM<sub>2.5</sub> and PM<sub>10</sub>) through the exposure of soils to wind erosion and dust entrainment. Exhaust emissions associated with heavy construction equipment would also occur.

Loch Lomond Scenario construction would have the potential to generate criteria air pollutant emissions. As shown in Table 4, the scenario would not exceed MBARD thresholds for criteria pollutants. Therefore, construction impacts related to criteria air pollutant emissions would be less than significant.



**Table 4 Construction Emissions (pounds/day)**

Pollutant	Maximum Daily Emissions	Significance Threshold	Significant Impact?
ROG	2	n/a	No
NO <sub>x</sub>	16	n/a	No
CO	20	n/a	No
SO <sub>x</sub>	<1	n/a	No
PM <sub>10</sub>	1	82	No
PM <sub>2.5</sub>	1	n/a	No

See Appendix D for RCEM worksheets.

### Operation

Operation of the proposed conjunctive use scenarios would not require additional operational vehicle trips for operation or maintenance of the physical infrastructure facilities compared to existing conditions and would rely on existing staff resources. While the Loch Lomond Scenario would introduce new water conveyance infrastructure, operation and maintenance of the infrastructure would be similar to the existing operation and maintenance practices. There would be no new employees required under operation of the plan. Therefore, operation of the plan would generate negligible operational emissions and would not exceed the MBARD thresholds for any criteria air pollutant. Operation of the conjunctive use scenarios would have a less than significant operational air quality impact.

### LESS THAN SIGNIFICANT IMPACT

*c. Would the project expose sensitive receptors to substantial pollutant concentrations?*

Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Sensitive receptors are defined as land uses that are more likely to be used by these population groups and include health care facilities, retirement homes, school and playground facilities, and residential areas. The nearest sensitive receptors to the new raw water pipeline required for the Loch Lomond Scenario are residential parcels along Clearview Place and Cooper Street located approximately 15 feet from the pipeline footprint. The nearest sensitive receptors to the Kirby Water Treatment Plant are residential parcels along Kirby Street located approximately 150 feet from the center of footprint of the treatment plant.

As discussed under items a and b above, the Loch Lomond Scenario’s construction emissions would not exceed the applicable MBARD PM<sub>10</sub> threshold, which is designed to be protective of public health. Grading and construction associated with the Loch Lomond Scenario could involve the use of diesel trucks and equipment that would emit diesel exhaust, including diesel particulate matter, which is classified as a toxic air contaminant. Nearby residents could potentially be exposed to construction-related diesel emissions. Construction-related diesel emissions would be of limited duration (i.e., primarily during grading) and would be temporary. CARB has identified diesel exhaust particulate matter as a toxic air contaminant, and assessment of toxic air contaminant cancer risks is typically based upon a 70-year exposure period. Project grading and construction activities that would utilize diesel-powered equipment would expose receptors to possible diesel exhaust for a very limited number of days over the estimated 12-month construction period. Because exposure to diesel exhaust would be well below the 70-year exposure period, and given the limited, intermittent

and short-term duration of construction activities that would use diesel equipment, construction-related diesel emissions would not be significant. Furthermore, the state implements emission standards for different classes of on- and off-road diesel vehicles and equipment that applies to off-road diesel fleets and includes measures such as retrofits that continue to reduce diesel emissions. Additionally, Title 13 of the California Code of Regulations (section 2485(c)(1)) prohibits idling of a diesel engine for more than five minutes in any location. This analysis assumes that the project would be required to comply with Title 13 of the CCR (section 2485(c)(1)). Consequently, construction of the Loch Lomond Scenario physical improvements would not expose sensitive receptors to substantial diesel pollutant concentrations.

Traffic-congested roadways and intersections have the potential to generate high localized carbon monoxide (CO) levels (i.e., CO hotspots). In general, CO hotspots occur in areas with poor circulation or areas with heavy traffic. Operation of the plan would generate nominal new pollutant emissions, including CO emissions, because the conjunctive use scenarios would not require additional maintenance trips. Therefore, the proposed conjunctive use scenarios would not result in CO hotspots on adjacent roadways.

The plan would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

- d. *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

According to the MBARD *CEQA Air Quality Guidelines* (2008), land uses associated with odor complaints typically include landfills, agricultural uses, wastewater treatment plants, food processing plants, chemical plants, refineries, and landfills. The conjunctive use scenarios do not include construction activities that are generally associated with the creation of objectionable odors. Upon completion of construction, there would be no long-term operations associated with the new raw water pipeline or the Kirby Water Treatment Plant that would result in generation of objectionable odors. The implementation of the SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not involve construction that would generate objectionable odors and operation of either of the scenarios would not result in the generation of objectionable odors. Therefore, no impact related to odors would occur.

#### **NO IMPACT**

# 4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The impact analysis presented in this section is based on the *Biological Technical Memorandum for the San Lorenzo Valley Water District Conjunctive Use Plan* prepared by Rincon Consultants, Inc. (2020; Appendix E) and the *Fisheries Resource Considerations for the San Lorenzo River Watershed Conjunctive Use Plan* prepared by Mike Podlech, Fisheries Biologist (2019; Appendix B).

The biological study area for this analysis included the District's three water systems where the plan would be implemented, and any locations where infrastructure improvements are proposed (e.g., the Loch Lomond Scenario).

## **Existing Conditions**

Land uses within the biological study area and the surrounding area consist of forestland, residential, and paved roads. The areas where infrastructure improvements are proposed consist of the San Lorenzo River (above the ordinary high water mark [OHWM]), developed roads, and the existing Kirby Water Treatment Plant, with developed redwood forest occurring in the surrounding area.

Vegetation communities within the biological study area include, but are not limited to: upland and riparian redwood forest, developed redwood forest, landscaped areas, ruderal communities, and paved roadways.

## **Special Status Species**

Because the plan would not require infrastructure improvements in natural habitats other than what was already permitted for the San Lorenzo Way Bridge Replacement project (under the Loch Lomond Scenario), no special-status plant species would be affected by the proposed plan.

Several special status amphibian, reptile, and mammal species (i.e., California red-legged frog, western pond turtle, American badger, hoary bat, white-tailed kite, osprey) may be present in the San Lorenzo River watershed. The biological study area also contains suitable nesting habitat for numerous migratory bird species, which could nest in the trees and shrubs during the nesting season (generally February 1 through August 31).

Two species of anadromous salmonids (fish that migrate between freshwater and marine habitats) are known to occur in the biological study area, and have the potential to be affected by changes in flow rates in the San Lorenzo River and its tributaries: coho salmon (Central California Coast Ecologically Significant Unit [*Oncorhynchus kisutch*]), federally and state endangered; and steelhead (Central California Coast Distinct Population Segment [*Oncorhynchus mykiss irideus*]), federally threatened.

- 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 Wildlife or U.S. Fish and Wildlife Service?*

No impacts to special status plants are expected under any of the Scenarios because no infrastructure improvements are proposed under the SLRBT Low-Flow or North System Scenarios and the Loch Lomond Scenario would limit improvements to the permitted bridge replacement footprint and existing developed areas (paved roadways).

Due to the limited extent of physical improvements, and the location of improvements for the Loch Lomond scenario within existing developed areas, impacts to California red-legged frog, western

pond turtle, American badger, and hoary bat are also not expected. Potential impacts to white-tailed kite, osprey, and nesting birds would only occur if active nests occur in the vicinity of construction under the Loch Lomond Scenario. Disturbance to nesting birds from construction activities and noise could result in nest failure. Mitigation is required to reduce these impacts to a less than significant level.

Impacts to coho salmon and steelhead would overall be beneficial. These actions would provide a cumulative benefit to salmonids by enhancing instream flows and improving habitat conditions in the San Lorenzo River and affected tributaries. Implementation of the North System Diversion would likely provide benefits to listed salmonids by reducing South System groundwater pumping and increasing dry season baseflow in Bean Creek, Zayante Creek, and the lower San Lorenzo River. Although the increase in dry season baseflow would be minor, it would help alleviate the limiting effects of low summer flows on steelhead and coho salmon in these eastern tributaries (Podlech 2019; Alley et al. 2004). In the upper San Lorenzo River and North System tributaries, the effect of additional wet season diversions under this scenario would be less than significant and impacts would overall be beneficial for coho salmon and steelhead. Under the Loch Lomond Scenario, the import of Loch Lomond water to the South System would allow a reduction in groundwater pumping that would increase baseflows in Bean Creek, Zayante Creek, and the lower San Lorenzo River, thus providing benefits to coho salmon and steelhead. Because the Loch Lomond Scenario would limit improvements to the permitted bridge replacement footprint (above the ordinary high water mark) and existing developed roads and the Kirby Water Treatment Plant, the infrastructure improvements under this scenario would have no impacts on anadromous salmonids. For additional detail, refer to the *Biological Technical Memorandum for the San Lorenzo Valley Water District Conjunctive Use Plan* (Rincon Consultants, Inc. 2020; Appendix E), and the *Fisheries Resource Considerations for the San Lorenzo River Watershed Conjunctive Use Plan* (Podlech 2019; Appendix B).

#### **LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

### **Mitigation Measures**

#### *BIO 1 Nesting Bird Survey*

For proposed infrastructure improvements associated with the Loch Lomond Scenario, a qualified biologist shall conduct a general pre-construction nesting bird survey for all migratory birds and raptors not more than 14 days prior to construction during the nesting season (February 1 through September 1) that occurs adjacent to undeveloped or landscaped areas that provides suitable nesting habitat. The survey shall consist of a qualified biologist conducting a visual inspection of the disturbance area plus a 200-foot buffer, as is feasible depending on possible access and/or line-of-site constraints, to detect any suitable nesting locations and determine if any nests occur. Pre-construction surveys are not required in areas where project activities have been continuous since prior to February 1. Areas that have been inactive for more than 14 days during the avian breeding season must be re-surveyed prior to resumption of project activities. If no active nests are identified, no further mitigation is required. If active nests are found the qualified biologist shall establish an appropriate buffer, taking into account the species sensitivity and physical location of the nest (line of site to the work area), to be in compliance with CFGC 3503 and 3503.5. In no cases shall the buffer be smaller than 50 feet for non-raptor bird species and 200 feet for raptor species. To prevent encroachment, the established buffer(s) shall be clearly marked by high visibility material. The established buffer(s) shall remain in effect until the young have fledged or the nest has been abandoned as confirmed by the qualified biologist.

- 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, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Redwood forest is considered a sensitive natural community by CDFW with a rank of G3 S3. Additionally, redwood alliances with California bay laurel, Douglas fir, tan oak, and the San Lorenzo River riparian corridor are also considered sensitive and are likely to be common in the biological study area. Because no infrastructure improvements are proposed under the SLRBT Low-Flow or North System Scenarios, no impacts to sensitive natural communities would occur. Construction of the new raw water connection for the Loch Lomond Scenario between the City of Santa Cruz's Newell Creek pipeline and the Felton raw water system would cross the San Lorenzo River which contains riparian habitat; however, the new pipeline would be 10 inches wide and installed on the bottom side of the new San Lorenzo Way Bridge. Construction-related impacts to riparian habitat and sensitive natural communities resulting from the replacement of the new San Lorenzo Way Bridge were fully analyzed and mitigated to less than significant levels in the 2014 San Lorenzo Way Bridge Replacement Project IS-MND (County of Santa Cruz 2014). The 2014 IS-MND assumed utilities would be relocated after construction of the new bridge was completed. Installation of the new raw water pipeline across the San Lorenzo River would not result in impacts to riparian habitat and sensitive natural communities; therefore, mitigation measures from the bridge replacement project would not apply and no new mitigation is required.

Installation of the new pipeline under the Loch Lomond Scenario would be subject to the resource agency permits obtained for the bridge replacement project.<sup>9</sup> No additional disturbance to riparian habitat or resource agency permitting is anticipated from installation of the new pipeline on the San Lorenzo Way bridge. Impacts to riparian habitat or sensitive natural communities as a result of plan implementation would be less than significant.

#### **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?*

Because the plan would not require infrastructure improvements within the limits of California Department of Fish and Wildlife, Regional Water Quality Control Board or United States Army Corps of Engineers jurisdiction, other than what was already permitted for the San Lorenzo Way Bridge Replacement project under the Loch Lomond Scenario, implementation of the plan would avoid direct impacts to state and federal jurisdictional features. Therefore, the project would not have a substantial adverse effect on state or federally protected wetlands. Minor changes in stream flow volumes resulting from the transfer of water from one system to another (North System Diversion Scenario) and importing water from the South System (Loch Lomond Scenario) are not expected to expand or alter the existing channels of jurisdictional waters subject to state and federal regulation. Impacts to state or federally protected wetlands would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

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<sup>9</sup> At the time of preparation of this IS-MND, the County of Santa Cruz had previously obtained a permit from CDFW for the San Lorenzo Way Bridge Replacement Project and was planning on obtaining a RWQCB permit prior to construction.

- 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?*

Regional and local corridors for terrestrial wildlife movement are likely to occur in undeveloped areas, and the San Lorenzo River and its major tributaries serve as important migration corridors and provide rearing habitat for anadromous salmonids. Under the SLRBT Low-Flow Scenario, SLWVD would continue to comply with Fall Creek bypass flow requirements and there would be no changes to Fall Creek diversion volumes or schedules. Fall Creek is known to support steelhead but not coho salmon (though coho salmon were historically present and Fall Creek is a candidate for coho salmon recovery), and its tributary Bennett Creek is impassible to anadromous salmonids but provides a substantial perennial flow contribution to Fall Creek (Podlech 2019). Changes to the operation of diversions on Bennett Spring/Bennett Creek and Bull Creek under this scenario would be negligible and would have no discernable effect on salmonid rearing habitat in these tributaries or downstream reaches of the San Lorenzo River. Because there would be no change to bypass flows, including during the migration seasons for adult and juvenile anadromous salmonids (late fall/winter and spring, respectively), this scenario would have no effect on salmonid migration. Elimination of the bypass requirement at the SLRBT gage would likely have no effect on listed salmonids in the San Lorenzo River. As described in detail by Podlech (2019), the SLRBT bypass requirement provides no apparent protection or enhancement for steelhead or coho salmon, as neither its magnitude nor its timing corresponds to the presence or ecological needs of these species in the San Lorenzo River.

Under the North System Diversions Scenario, unused potential diversions from North System surface water sources would be transferred to the South System during the wet season (December–April) when streamflows are highest, thus minimizing the proportional reduction in flows downstream of the diversion locations and the potential for impacts to anadromous salmonid migration. Any effects on rearing habitat for anadromous salmonids would be negligible and are not expected to result in a discernable reduction in rearing suitability for these species. Most of the transferred water would originate from the combined Clear Creek, and Sweetwater Creek diversions, which account for approximately 85 percent of the combined unused surface diversion potential of the North System. Simulations indicate the transfers would result in monthly flow reductions of 1 percent or less downstream of the diversions. Potential flow reductions in Peavine and Foreman creeks, tributaries to Boulder Creek that represent about 15 percent of the combined unused surface diversion potential of the North System, would be negligible (Podlech 2019). There would be no increase in existing diversion capacities or rates in the North System under this scenario and no construction or new infrastructure.

The North Systems Diversions Scenario would result in a moderate reduction in Clear Creek wet season flow. Clear Creek is considered to have limited anadromous salmonid value for the purposes of evaluating effects of the Conjunctive Use Plan scenarios. As cited by Podlech (2019), this determination is based on the lack of positive evidence of steelhead or coho salmon in Clear Creek or its tributary Sweetwater Creek, likely barriers to salmonid passage near Clear Creek's downstream end, and previous assessments by other investigators that rated Clear Creek's habitat quality as poor and its intrinsic potential to support steelhead as moderate. Podlech (2019) noted that the National Marine Fisheries Service (NMFS) determined that Clear Creek had no intrinsic potential to support coho salmon. Podlech (2019) evaluated equivalent data for Peavine and Foreman creeks and determined these tributaries too have no anadromous salmonid value for purposes of evaluating the fisheries effects of the conjunctive use scenarios. The negligible wet

season flow reductions in these tributaries are not anticipated to cause adverse impacts to flows in Boulder Creek or the San Lorenzo River downstream of the Boulder Creek confluence (Podlech 2019).

Under the Loch Lomond Scenario, the import of Loch Lomond water to the South System would allow a reduction in groundwater pumping that would increase baseflows in Bean Creek, Zayante Creek, and the lower San Lorenzo River. Required infrastructure improvements would have no effect on fish, fish habitat, or fish movement. Simulated increases in drought minimum baseflow would be approximately 0.15 cfs in Bean and Zayante creeks and 0.2 cfs in the lower San Lorenzo River at Big Trees. The effects of increased baseflows would be beneficial to anadromous salmonids. In combination with the North System Diversion Scenario, the combined 0.25 cfs increase in drought minimum flows in Bean and Zayante creeks would provide additional cumulative benefits to anadromous salmonids rearing under drought-stressed conditions.

Because none of the scenarios would result in significantly reduced flows in creeks occupied by salmonids or seasonally timed during potential occupancy, impacts to salmonid movement would be less than significant and impacts to rearing would be beneficial.

#### **LESS THAN SIGNIFICANT IMPACT**

- e. *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

The biological study area is within unincorporated Santa Cruz County. No tree removal or development within any sensitive habitats that might be protected by local policies and ordinances is proposed, beyond the County of Santa Cruz San Lorenzo Way Bridge Replacement project. Therefore, impacts would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

- 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?*

The City of Santa Cruz is currently developing a Habitat Conservation Plan (HCP), which would include parts of the biological study area. However, this HCP has not yet been adopted. The biological study area is not within any adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) areas. Although the HCP was not reviewed for this evaluation, it is understood that its objectives include avoiding and minimizing effects of the City's diversions on steelhead and coho salmon. The Conjunctive Use Plan would not result in significant impacts to steelhead or coho salmon, and would have an overall benefit to these species. Therefore, the Conjunctive Use Plan is consistent with the anticipated goals and objectives of the draft HCP. No impacts to potentially covered species would occur, and the plan would have an overall beneficial impact for salmonids. Therefore, the project would not conflict with state, regional, or local habitat conservation plans.

#### **NO IMPACT**



# 5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The significance of cultural resources and impacts to those resources is determined by whether or not those resources can increase collective knowledge of the past. The primary determining factors are site content and degree of preservation. This analysis focuses on areas of ground disturbance. Because ground disturbance is only proposed within Loch Lomond Scenario, the analysis focuses only on the Loch Lomond Scenario physical improvements.

Rincon conducted a records search of the California Historical Resources Information System at the Northwestern Information Center (NWIC), located at Sonoma State University. The search identified previously recorded cultural resources and previously conducted cultural resources studies in the Loch Lomond Scenario and a 0.5-mile buffer (Appendix F). The records search included a review of the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks, California Points of Historical Interest, Archaeological Determinations of Eligibility list, and historic maps.

The NWIC records search identified 16 previously recorded cultural resources within a 0.5-mile radius of the Loch Lomond Scenario improvements. None of the recorded resources are located within the Loch Lomond Scenario footprint. Of these 16 resources, 14 are historic-period structures, one is a historic district, and one is a prehistoric lithic scatter. Three of the historic-period structures are adjacent to the Loch Lomond Scenario physical improvement area (Highway 9, Felton Fire District Station, and Felton Presbyterian Church).

The NWIC search identified 23 previously conducted cultural resource studies within a 0.5-mile radius of the Loch Lomond Scenario. Of the 23 previously conducted studies, five are within the Loch Lomond Scenario improvement footprint (S-030907, S-39178, S-28809, S-4066, and S-3787). S-030907 documents the results of a historic bridge survey, which included the San Lorenzo Way Bridge (36C0085). The study evaluated the bridge and recommended it eligible for listing on the NRHP. None of the remaining studies identified cultural resources within the Loch Lomond Scenario improvement area.

- a. *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

Implementation of the proposed conjunctive use scenarios would involve the installation of new infrastructure within existing structures that are less than 45 years old and installation of subsurface and suspended water pipelines. According to historic aerials, the Kirby Water Treatment Plant was built between 1991 and 2005 (NETR 2021).

According to the 2014 San Lorenzo Way Bridge Replacement Project IS-MND, the San Lorenzo Way Bridge (36C0085) was previously determined to be eligible for listing in the National Register of Historic Places (NRHP). Because the bridge replacement project would remove the existing historic structure and replace it with a new concrete bridge, it was determined to have a potentially significant impact. The 2014 IS-MND incorporated a cultural resources mitigation measure requiring recordation of the existing bridge, preparation of a written historical report, and distribution of the documentation. With mitigation incorporated, impacts were determined to be less than significant (County of Santa Cruz 2014).

Under the proposed Loch Lomond Scenario, a new water pipeline would be suspended under the new bridge. The 2014 IS-MND assumed utilities would be relocated after construction of the new bridge was completed. Installation of the new suspended raw water pipeline would not result in impacts to historical resources, because the historical resource will have already been removed. Mitigation measures from the bridge replacement project would not apply and no new mitigation is required.

**NO IMPACT**

- b. *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

No archaeological resources were identified within the Loch Lomond Scenario physical improvement area during the records search. Much of the Loch Lomond Scenario has been previously studied, and all previous studies were negative for cultural resources. Although no archaeological resources have been previously identified within the Loch Lomond Scenario footprint, there is potential for unknown, buried archaeological resources to be discovered during ground disturbing activities. If potential archaeological resources are discovered during subsurface excavations at the construction site, Section 01560 Part 1.09E of the SLVWD's construction contractor specifications require that the contractor halt construction operations at the location of the find and contact a qualified archaeologist to assess the value of the potential cultural resources.

With adherence to existing requirements, impacts to archaeological resources would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

- c. *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

Based on the disturbed nature of the physical improvements area and the lack of any identified cultural resources within the study area, the potential to encounter human remains is considered low. However, the discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the 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 Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner will notify the California Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

Impacts to human remains would be less than significant with adherence to existing regulations.

**LESS THAN SIGNIFICANT IMPACT**

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# 6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Energy Supply Setting

Energy use relates directly to environmental quality, since it can adversely affect air quality and can generate greenhouse gas emissions that contribute to climate change. Fossil fuels are burned to create electricity that powers residences and commercial/industrial buildings, heats and cools buildings, and powers vehicles. Transportation energy use is related to the fuel efficiency of cars, trucks, and public transportation; choice of different travel modes such as auto, carpool, and public transit; and miles traveled by these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy.

### *Electricity and Natural Gas*

The California Public Utilities Commission and the California Energy Commission (CEC) are constantly assessing population growth, electricity demand, and reliability. The CEC is tasked with conducting assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices (CEC 2021a). The CEC uses these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state’s economy, and protect public health and safety (PRC Section 25301(a)).

In 2019, California used 277,704 gigawatt hours of electricity, of which approximately 32 percent of electricity generated was from renewable resources (CEC 2019a). Santa Cruz County used 1,200 gigawatt hours of electricity in 2019 (CEC 2019b). Santa Cruz County used 53 million U.S. therms of natural gas in 2019 (CEC 2019c). The project site would be provided electricity and natural gas by Pacific Gas & Electric (PG&E). SLVWD has begun purchasing electricity from Central Coast Community Energy through its Community Choice Energy model (SLVWD 2021a).

Central Coast Community Energy (3CE) provides electricity generated from a greater percentage of renewable energy sources in comparison to the standard statewide energy mix. Monterey Bay Community Power services are divided into two tiers, including 3Cchoice and 3Cprime. The default tier that electricity customers are automatically enrolled in is 3Cchoice, which is composed of a

minimum of 31 percent electricity generated from eligible renewable sources, as defined by the state Renewable Portfolio Standard.<sup>10</sup> 3CE has sourced approximately 3,100 gigawatt hours of electricity since its creation in 2017 (3CE 2021).

## Impact Analysis

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

### Construction

During the Loch Lomond Scenario construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the Loch Lomond Scenario site, construction worker travel to and from the site, and vehicles used to deliver materials to the site. The proposed Loch Lomond Scenario would require demolition, site preparation and grading, construction, and paving. As shown in Table 5, project construction would require approximately 2,133 gallons of gasoline and approximately 23,873 gallons of diesel fuel. These construction energy estimates are conservative because they assume that the construction equipment used in each phase of construction is operating for eight hours, every day of construction.

**Table 5 Estimated Fuel Consumption during Construction**

Source	Fuel Consumption (gallons)	
	Gasoline	Diesel
Construction Equipment and Hauling Trips	–	23,873
Construction Worker Vehicle Trips	2,133	–

See Appendix G for energy calculation sheets.

Energy use associated with the Loch Lomond Scenario construction would be temporary in nature, and construction equipment would be typical of similar sized construction projects in the region. In addition, the Loch Lomond Scenario’s construction contractors would demonstrate compliance with applicable CARB regulations that restrict the idling of heavy-duty diesel motor vehicles and govern the accelerated retrofiting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. Construction contractors would be required to comply with the provisions of 13 California Code of Regulations Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes, thereby minimizing unnecessary fuel consumption. Construction equipment would be subject to the USEPA Construction Equipment Fuel Efficiency Standard, which would also minimize inefficient, wasteful, or unnecessary fuel consumption. These practices would result in efficient use of energy necessary to construct the project.

In the interest of cost efficiency, construction contractors would also not utilize fuel in a wasteful or unnecessary manner. Therefore, the Loch Lomond Scenario would not involve the inefficient,

<sup>10</sup> The Renewable Portfolio Standard is a state program that requires power entities to supply retail sales with minimum quantities of renewable energy. Renewable Portfolio Standard eligible renewable sources of power include solar, wind, biomass and biowaste, geothermal, and certain hydroelectric facilities.

wasteful, and unnecessary use of energy during construction, and the project's construction energy consumption impact would be less than significant.

## **Operation**

Operation of the proposed Loch Lomond Scenario would require minimal energy use. Electricity demands of the proposed conjunctive use scenarios would be met by PG&E. Operation and maintenance activities would be conducted by existing SLVWD employees and would not require additional vehicle trips compared to existing conditions. Therefore, electricity and fuel consumption would not be wasteful, inefficient, or unnecessary because maintenance activities would only occur as necessary for facility operation. The proposed diversion structures included in the plan would be entirely gravity fed. As such, the SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not require energy for operation. The proposed Loch Lomond Scenario would require approximately 66 MWh of electricity annually to operate due to increased pumping needs. The plan's operational electricity consumption would be less than 0.01 percent of energy used in Santa Cruz County's current electricity demand and less than 0.01 percent of 3CE's total sourced electricity. The conjunctive use scenarios are not anticipated to use natural gas. Therefore, the conjunctive use plan would represent a less than cumulatively considerable percentage of PG&E's annual electricity demand and operational energy impacts would be less than significant.

### **LESS THAN SIGNIFICANT IMPACT**

*b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

The District has not adopted specific renewable energy or energy efficiency plans with which the project could comply. Adopted on September 10, 2018, California Senate Bill (SB) 100 accelerates the State's Renewables Portfolio Standards Program by requiring electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045. Because the conjunctive use plan would be powered by the existing electricity grid, the plan would eventually be powered by renewable energy mandated by SB 100 and would not conflict with this statewide plan. The conjunctive use plan would not conflict with or obstruct the state plan for renewable energy; therefore, no impact would occur.

### **NO IMPACT**

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# 7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Would the project:

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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?*

The Loch Lomond Scenario physical improvements area is situated approximately 4.5 miles south of the Zayante Fault (County of Santa Cruz 2009a). The area is not located within an Alquist-Priolo Earthquake Fault Zone (DOC 2015). Although the physical infrastructure facilities associated with the conjunctive use scenarios are located in a seismically active area, implementation of the scenarios would not expose people to seismically induced risk. The proposed Loch Lomond Scenario involves construction of an underground pipeline, a suspended pipeline under a bridge, and the installation of upgraded equipment at the Kirby Water Treatment Plant. The first two conjunctive use scenarios would not require new infrastructure, and none of the conjunctive use scenarios would involve any habitable structures. A large seismic event, such as a fault rupture, seismic shaking, or ground failure, could result in breakage of the proposed pipelines, failure of joints, and/or underground leakage from the water infrastructure. In such an event, the infrastructure would be inspected and repaired as soon as possible. Additionally, the Loch Lomond Scenario improvements would be required to comply with the California Building Standards Code (CCR Title 24). The improvements have been designed to incorporate appropriate standard engineering practices and specifications to minimize risk of structural failure in a seismic event and reduce secondary impacts that may occur as a result. Design and construction would also adhere to American Water Works Association Standards for protection from thrust and earth movement.

The proposed conjunctive use plan would not involve development of habitable structures, does not involve infrastructure located within an Alquist-Priolo Earthquake Fault Zone, and would not introduce infrastructure that would cross an active fault. Therefore, implementation of the plan would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, and impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

- a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

As discussed under item a(1), a large seismic event, such as seismic shaking, could result in breakage of the proposed pipelines, failure of joints, and/or underground leakage from the water infrastructure. In such an event, the infrastructure would be inspected and repaired as soon as possible. The proposed improvements have been designed to incorporate appropriate standard engineering practices and specifications to minimize risk of structural failure in a seismic event and reduce secondary impacts that may occur as a result.

The proposed conjunctive use plan would not involve development of habitable structures, does not involve infrastructure located within an Alquist-Priolo Earthquake Fault Zone, and would not introduce infrastructure that would cross an active fault. Therefore, implementation of the plan would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, and impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*

The SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not involve construction activities, as no new infrastructure is proposed under these scenarios. Both scenarios would rely on existing infrastructure; therefore, they would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

Under the proposed Loch Lomond Scenario, a new suspended pipeline would be installed under the new San Lorenzo Way Bridge in Felton. Within the Loch Lomond Scenario physical improvements area, liquefaction susceptibility has been mapped by the County of Santa Cruz as “Moderate” (County of Santa Cruz 2009c). However, the Loch Lomond Scenario involves infrastructure improvements that would be located underground, attached to a new bridge, or within the existing Kirby Treatment Plant building. None of the proposed infrastructure would destabilize the terrain in a manner that would increase the risk of liquefaction.

Construction activities associated with the new waterlines as part of the Loch Lomond Scenario would include excavating up to a maximum depth of four feet. Approximately 283 cubic yards of soil would be imported and approximately 300 cy of excavated soil would be exported from the construction area. Construction activities would include the lining and appropriate backfilling of trenches to minimize potential effects associated with subsidence. In addition, Sections 01540 and 02221 of the SLVWD’s construction contractor specifications require contractors to submit and implement a detailed plan that includes sheeting, shoring, bracing, or other excavation supports to prevent caving of the trenches. Therefore, the Loch Lomond Scenario would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure or liquefaction, and impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

As discussed, under item a(2), the SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not involve construction activities, as no new infrastructure is proposed under these scenarios. Both scenarios would rely on existing infrastructure; therefore, they would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Under the proposed Loch Lomond Scenario, a new suspended pipeline would be installed under the new San Lorenzo Way Bridge in Felton. The bridge is located adjacent to landslide hazard areas mapped by the County of Santa Cruz (County of Santa Cruz 2009b). However, the Loch Lomond Scenario involves infrastructure improvements that would be located underground, attached to a new bridge, or within the existing Kirby Treatment Plant building. None of the proposed infrastructure would destabilize the terrain in a manner that would increase the risk of landslides.

Construction activities associated with the new waterlines as part of the Loch Lomond Scenario would include excavating up to a maximum depth of four feet. Approximately 283 cubic yards of soil would be imported and approximately 300 cy of excavated soil would be exported from the construction area. Construction activities would include the lining and appropriate backfilling of trenches to minimize potential effects associated with subsidence. In addition, Sections 01540 and 02221 of the SLVWD’s construction contractor specifications require contractors to submit and

implement a detailed plan that includes sheeting, shoring, bracing, or other excavation supports to prevent caving of the trenches. Therefore, the Loch Lomond Scenario would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides, and impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*b. Would the project result in substantial soil erosion or the loss of topsoil?*

Physical improvements under the Loch Lomond Scenario that occur at the San Lorenzo Way Bridge have moderate slopes with minimal potential for soil erosion. The San Lorenzo Way Bridge location has an average slope of approximately 15 percent with a maximum slope of approximately 30 percent (USDA 2021). The proposed location has been previously disturbed with the construction of the existing bridge; however, future construction activities on the San Lorenzo Way Bridge involving soil disturbance, such as excavation, stockpiling, and grading, could result in increased erosion and sediment transport by stormwater and wind to surface waters (County of Santa Cruz 2014). As discussed in Section 10, *Hydrology and Water Quality*, construction activities associated with the Loch Lomond Scenario would be required to comply with the Construction General Permit and implement a stormwater pollution prevention plan (SWPPP), which would include best management practices (BMPs) to minimize erosion, siltation, and polluted runoff. In addition, construction activities would incorporate BMPs and erosion controls in compliance with the Santa Cruz County Municipal Code and standard District construction specifications. With regulatory compliance, potential construction impacts associated with substantial soil erosion or the loss of topsoil would be less than significant. The SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not involve construction activities and would not result in substantial soil erosion or loss of topsoil.

As discussed further in Section 10, *Hydrology and Water Quality*, operation of the proposed conjunctive use scenarios would not result in substantial erosion or loss of topsoil. Due to the small changes in streamflow volume relative to the natural capacity of the channel, the proposed seasonal changes in surface water flows would not result in substantial erosion or siltation and impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

*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?*

Although the physical infrastructure facilities associated with the conjunctive use scenarios are in a seismically active area, implementation of the scenarios would not adversely affect soil stability or increase the potential for local or regional landslides, liquefaction, lateral spreading, or collapse.

The proposed Loch Lomond Scenario involves installation of an underground pipeline primarily within public ROW and an aboveground pipeline suspended under an existing bridge footprint that will be replaced with a new bridge under the separate San Lorenzo Way Bridge Replacement Project (County of Santa Cruz 2014). As discussed previously, although improvements associated with this scenario would be located in a seismically active area, it is not anticipated to adversely affect soil stability or increase the potential for local or regional landslides, subsidence, liquefaction, or collapse. Sections 01540 and 02221 of the SLVWD's construction contractor specifications require contractors to submit and implement a detailed plan that includes sheeting, shoring, bracing, or

other excavation supports to prevent caving of the trenches. As discussed above in item 6(b), implementation of a SWPPP and adherence to the Construction General Permit would control erosion and stabilize on-site soils. Therefore, impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

- 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?*

The physical infrastructure facilities associated with the proposed conjunctive use scenarios are located in the Coast Ranges physiographic province (City of Santa Cruz 2011). Based on the United States Department of Agriculture (USDA) Soil Survey, the Loch Lomond Scenario physical improvements area contains three primary mapped soil units: Soquel loam, Elkhorn sandy loam, Ben Lomond-Catelli-Sur complex soils, Lompico-Felton complex and Ben Lomond sandy loam soils. These soils have low to moderate shrink-swell potential and are generally well-drained and do not exhibit frequent flooding or ponding (USDA 2021). Additionally, according to the County of Santa Cruz, the Loch Lomond Scenario physical improvements area is not underlain by expansive soils (County of Santa Cruz 2009c). Therefore, implementation of the Loch Lomond Scenario would not introduce risk to life or property as a result of expansive soils. The SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not involve construction activities that would be located on expansive soils. No impact would occur.

**NO IMPACT**

- e. *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The conjunctive use plan would not include the use of septic tanks or alternative wastewater disposal systems. No impact would occur.

**NO IMPACT**

- f. *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

The County of Santa Cruz has identified and mapped areas that contain hydrological, geological, and paleontological resources which stand out as rare or unique and representative in the County of Santa Cruz because of their scarcity, scientific or educational value, aesthetic quality or cultural significance. The Loch Lomond Scenario is the only proposed scenario that requires construction and no known resources exist on site (County of Santa Cruz 2017). In addition, ground-disturbing activities associated with the Loch Lomond Scenario physical improvements would be limited to previously disturbed areas. The connection between Newell Creek pipeline and the Felton raw water system, as well as the trenched underground pipeline from San Lorenzo Way Bridge to Farmer Street, would occur within the previously disturbed paved roadway, with a maximum excavation depth of four feet. No ground disturbance would occur as a result of the installation of suspended pipeline under the San Lorenzo Way Bridge. All proposed upgrades to the Kirby Water Treatment Plant would occur within the footprint of the existing treatment plant building. Therefore, impacts to paleontological resources would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

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## 8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Overview of Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth’s atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of greenhouse gas (GHG) emissions contributing to the “greenhouse effect,” a natural occurrence which takes place in Earth’s atmosphere and helps regulate the temperature of the planet. The majority of radiation from the sun hits Earth’s surface and warms it. The surface, in turn, radiates heat back towards the atmosphere in the form of infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping into space and re-radiate it in all directions.

GHG emissions occur both naturally and as a result of human activities, such as fossil fuel burning, decomposition of landfill wastes, raising livestock, deforestation, and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO<sub>2</sub>) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as “carbon dioxide equivalent” (CO<sub>2</sub>e), which is the amount of GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 28, meaning its global warming effect is 28 times greater than CO<sub>2</sub> on a molecule per molecule basis (Intergovernmental Panel on Climate Change 2014).<sup>11</sup>

Anthropogenic activities since the beginning of the industrial revolution (approximately 250 years ago) are adding to the natural greenhouse effect by increasing the concentration of GHGs in the atmosphere that trap heat. Since the late 1700s, estimated concentrations of CO<sub>2</sub>, methane, and nitrous oxide in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent,

<sup>11</sup> The Intergovernmental Panel on Climate Change’s (2014) *Fifth Assessment Report* determined that methane has a GWP of 28. However, the 2017 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change’s (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWP of 25.

respectively, primarily due to human activity (USEPA 2020). Emissions resulting from human activities are thereby contributing to an average increase in Earth’s temperature. Potential climate change impacts in California may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (State of California 2018).

## **Regulatory Framework**

In response to climate change, California implemented Assembly Bill (AB) 32, the “California Global Warming Solutions Act of 2006.” AB 32 required the reduction of statewide GHG emissions to 1990 emissions levels (essentially a 15 percent reduction below 2005 emission levels) by 2020 and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. On September 8, 2016, the Governor signed Senate Bill (SB) 32 into law, extending AB 32 by requiring the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program and the Low Carbon Fuel Standard, and implementation of recently adopted policies and legislation, such as SB 1383 (aimed at reducing short-lived climate pollutants including methane, hydrofluorocarbon gases, and anthropogenic black carbon) and SB 100 (discussed further below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) of CO<sub>2</sub>e by 2030 and two MT of CO<sub>2</sub>e by 2050 (CARB 2017).

Other relevant state laws and regulations include:

- **SB 375.** The Sustainable Communities and Climate Protection Act of 2008 (SB 375), signed in August 2008, enhances the state’s ability to reach AB 32 goals by directing the CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. Metropolitan Planning Organizations are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the Metropolitan Planning Organization’s Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. AMBAG was assigned targets of a 3 percent reduction in per capita GHG emissions from passenger vehicles from 2005 levels by 2020 and a 6 percent reduction in per capita GHG emissions from passenger vehicles from 2005 levels by 2035. AMBAG adopted the 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy (AMBAG MTP/SCS) in June 2018, which meets the requirements of SB 375.
- **SB 100.** Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state’s Renewables Portfolio Standard Program. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.
- **California Building Standards Code (California Code of Regulations Title 24).** The California Building Standards Code consists of a compilation of several distinct standards and codes related to building construction including plumbing, electrical, interior acoustics, energy efficiency, and handicap accessibility for persons with physical and sensory disabilities. The



current iteration is the 2019 Title 24 standards. Part 6 is the Building Energy Efficiency Standards, which establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. Part 12 is the California Green Building Standards Code (CALGreen), which includes mandatory minimum environmental performance standards for all ground-up new construction of residential and non-residential structures.

## **Significance Thresholds**

The majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines Section 15064[h][1]).

In 2013, the County of Santa Cruz adopted a Climate Action Strategy (CAS) to establish goals and policies that incorporate sustainability and GHG reduction into its management processes. The first step in completing the CAS was to complete a GHG emissions inventory. The County of Santa Cruz's 2009 inventory amounted to 791,278 MT of CO<sub>2</sub>e community-wide and 34,267 MT of CO<sub>2</sub>e from municipal operations. As of 2013, the County had already achieved the State's AB 32 goal of reducing GHG emissions to below 1990 levels by 2020 because of the cessation of manufacturing at the Davenport Cement Plant. Therefore, the County of Santa Cruz has set a goal to reduce emissions to 18 percent below 2009 levels by 2020, 30 percent below 2009 levels by 2035, and 59 percent below 2009 levels by 2050 (County of Santa Cruz 2013).

Neither MBARD nor SLVWD have adopted GHG emissions thresholds. MBARD is currently in the process of developing GHG emissions thresholds for evaluating projects under CEQA. Where MBARD is the lead agency, it has adopted a threshold of 10,000 MT of CO<sub>2</sub>e per year for stationary source projects or compliance with an adopted GHG Reduction Plan/Climate Action Plan (MBARD 2016). However, MBARD does not have formally adopted thresholds for projects where it is not the lead agency.

As identified in Section 15064.7(c) of the CEQA Guidelines, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence. In April 2012, the San Luis Obispo County Air Pollution Control District (SLOAPCD), whose jurisdiction is adjacent to MBARD's jurisdiction to the south, adopted quantitative thresholds for GHG emissions for most land use projects (SLOAPCD 2012). However, recent guidance from SLOAPCD states the District's thresholds should not be used for projects with a planning horizon beyond 2020 (SLOAPCD 2021). Thus, for the purposes of this analysis, thresholds developed by the Bay Area Air Quality Management District (BAAQMD) are considered to determine the significance of GHG emissions. BAAQMD thresholds are appropriate due to the proximity of the air district to MBARD and Santa Cruz County, and similar coastal climate. In May 2017, BAAQMD, whose jurisdiction is adjacent to MBARD to the north, adopted quantitative thresholds for GHG emissions for most land use projects (BAAQMD 2017). The BAAQMD CEQA Air Quality Guidelines include a bright line threshold of 1,100 MT CO<sub>2</sub>e per year. It should be noted that the BAAQMD's thresholds were established based on achieving the 2020 GHG emission reduction targets set forth in the AB 32 Scoping Plan. Therefore, because the proposed project would have a post-2020

buildout year, the bright-line (i.e., mass emissions) threshold of significance (1,100 MT CO<sub>2</sub>e per year) was adjusted based on the SB 32 target of a 40 percent reduction in GHG emissions below 1990 levels (Association of Environmental Professionals 2016). Since the 2020 GHG targets set forth in the AB 32 Scoping Plan are designed to reduce GHG emissions to 1990 levels, it follows that the BAAQMD threshold of 1,100 MT CO<sub>2</sub>e per year must decrease by 40 percent by 2030 to meet the statewide 2030 GHG emission reduction targets. Therefore, for the purposes of this analysis, the proposed project’s year 2030 GHG emissions would be significant if they would exceed 660 MT of CO<sub>2</sub>e per year.

## Impact Analysis

- a. *Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*

The SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not involve construction activities and thus, would not generate construction GHG emissions. GHG emissions for construction of the Loch Lomond Scenario were calculated using RCEM. The model calculates CO<sub>2</sub>e emissions per day and per construction phase. Loch Lomond Scenario construction would primarily generate GHG emissions from construction equipment operation, construction worker vehicle trips to and from the site, and from export of materials off-site. Construction input data for RCEM included anticipated start and finish dates of construction activity and inventories of construction equipment to be used. The analysis assessed maximum daily emissions from individual construction activities, including grubbing/land clearing, grading/excavation, drainage/utilities/sub-grade, and paving. Construction equipment estimates were provided by the District. Project-related construction emissions are confined to a relatively short period in relation to the overall life of the plan. Neither the District nor BAAQMD have adopted a threshold of significance for construction-related GHG emissions. However, the BAAQMD recommends quantifying and disclosing GHG construction emissions. Therefore, construction-related GHG emissions were quantified for informational purposes. Table 6 shows that the Loch Lomond Scenario construction would result in a total of approximately 761 MT CO<sub>2</sub>e.

**Table 6 Estimated Construction GHG Emissions**

Year	Project Emissions (MT/yr CO <sub>2</sub> e)
Total	761

See Appendix G for modeling worksheets.

The plan would not generate operational GHG emissions as the operation and maintenance of all three scenarios under the conjunctive use scenarios would not require additional maintenance beyond existing maintenance requirements of current infrastructure. Operation of the plan would not result in generation of operational GHG emissions. Impacts would be less than significant.

### LESS THAN SIGNIFICANT IMPACT

- b. *Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

The District does not have a specific plan or policy adopted for the purpose of reducing GHG emissions. However, the District has adopted a resolution (Resolution No. 2 [08-09] Climate Change and Water Resource Management) through which the District has committed to implementing the goal of AB 32 and to further reducing GHG emissions to 80 percent below 1990 levels by 2050 (SLVWD 2021c). Since 2008, the District has reported its annual GHG emissions and calculated its carbon footprint. The District's largest overall source of GHG emissions is electricity followed by stationary combustion then mobile combustion. As described in Section 6, *Energy*, the conjunctive use scenarios would not require substantial amounts of energy and would represent a 0.01 percent of PG&E's electricity generation for the area. Furthermore, purchase of renewable energy through 3CE would reduce GHG emissions from energy use. The District's emissions from stationary combustion are generated by natural gas and other fossil fuels to run generators and are generally only used in the event of a power outage (SLVWD 2021a). The proposed conjunctive use scenarios would not involve the use of generators and as such, would not substantially contribute to emissions from stationary combustion. Mobile combustion emissions generated by the District are from its vehicle fleet (i.e., operation and maintenance trips). The proposed conjunctive use scenarios would not require additional trips for operation and maintenance of the proposed conjunctive use scenarios and as such, would not increase mobile combustion emissions. The conjunctive use plan would therefore be consistent with the SLVWD's resolution for the purpose of reducing GHG emissions.

In addition, there are local plans, policies, and regulations adopted to reduce GHG emissions that the project would support. The County of Santa Cruz (2013) CAS establishes GHG reduction strategies to be incorporated at the county level. Strategy E-8 calls for a reduction of energy use for water supply through water conservation measures, including adoption of a water conservation ordinance, adoption of a water-efficient landscape ordinance, and promotion of residential greywater irrigation systems. As described in Section 8, *Project Description*, the main purpose of the plan is to optimize the conjunctive use of surface and groundwater sources to improve aquatic habitat and water supply reliability within the San Lorenzo River watershed. The conjunctive use scenarios would not serve new growth. As described in Section 6, *Energy*, the conjunctive use plan would require 66 MWh of electricity for operation which would represent 0.01 percent of PG&E's electricity generation for the area. The conjunctive use plan would not require a substantial amount of energy for conveyance of water supply. Furthermore, customer compliance with conservation measures as set forth by the SLVWD would further reduce energy use for water supply conveyance. The proposed conjunctive use scenarios are therefore consistent with the CAS. The project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. No impact would occur.

**NO IMPACT**

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# 9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Would the project:

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site that is included on a list of hazardous material 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. For a project located in 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

The SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not create a significant hazard to the public as neither scenario involves the transport, use, disposal, or release of hazardous materials. However, construction of improvements for the Loch Lomond Scenario would temporarily increase the transport and use of hazardous materials in the area during the use of construction vehicles and equipment. Limited quantities of miscellaneous hazardous substances, such as diesel fuel, oil, solvents, and other similar materials, would be transported to the Loch Lomond Scenario physical improvement areas, used, and stored during the construction period. These materials would be disposed of off-site in accordance with all applicable laws pertaining to the handling and disposal of hazardous waste. In addition, Section 01010 Part 1.07, Section 01060 Part 1.08, and Section 01560 Part 1.07 of the SLVWD's construction contractor specifications state that the contractor must comply with the following procedures regarding hazardous materials, which would reduce hazardous materials impacts to a less than significant level:

- Properly store all volatile and hazardous wastes in covered metal containers and remove these wastes daily in accordance with all applicable disposal regulations, local ordinances, and anti-pollution laws.
- Store hazardous materials in covered, leak-proof containers when not in use, away from storm drains and heavy traffic areas, and in areas protected from rainfall infiltration.
- Store hazardous materials on a surface that prevents spills from permeating the ground surface and in an area secure from unauthorized entry at all times.
- Collect, remove, and legally dispose of waste oil, used oil filters, other waste petroleum materials, and any other hazardous waste generated by the contractor at suitable disposal facilities off-site.
- Construct on-site temporary fuel storage facilities to comply with current regulations. Ensure that fuel storage facilities are diked to contain any fuel spills and are properly grounded.
- Provide oil drip pans to contain any oil leakage from construction vehicles.

In the unlikely event that unanticipated, existing soil or groundwater contamination is discovered during construction associated with the Loch Lomond Scenario, SLVWD has set forth construction contractor specifications that require appropriate treatment, handling, and notification of unanticipated hazardous environmental conditions. Article 4 of the *General Conditions* of SLVWD's construction contractor specifications states that if the construction contractor encounters a hazardous environmental condition, the construction contractor shall immediately secure or otherwise isolate such condition, stop all work in connection with such condition and in any area affected thereby, and notify SLVWD and the District Engineer of the hazardous environmental condition. The construction contractor shall not be required to resume work in connection with such condition or in any affected area until after SLVWD has obtained any required permits related thereto and delivered written notice to the construction contractor specifying that such condition and any affected area is or has been rendered safe for the resumption of work and specifying any special conditions under which such work may be resumed safely.

All construction activities associated with the Loch Lomond Scenario would be required to comply with all applicable regulations, including the enforcement of hazardous materials treatment, handling, notification, and transportation regulations and implementation of BMPs as required by

SLVWD's construction contractor specifications. As such, the Loch Lomond Scenario would not create a significant hazard to the public through the transport, use, disposal, or release of hazardous materials and impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

- 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?*

As discussed under item a, the SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not create a significant hazard to the public as neither scenario involves the transport, use, disposal, or release of hazardous materials. Ground-disturbing activities could cause an accidental upset or accident condition of hazardous materials in use during construction. If such conditions cause a release of hazardous materials into the environment, potential impacts could occur. However, Section 01010 Part 1.07, Section 01060 Part 1.08, and Section 01560 Part 1.07 of the SLVWD's construction contractor specifications state that the contractor must comply with specific procedures regarding hazardous materials, identified under item a, which would reduce hazardous materials impacts to a less than significant level:

In addition, all construction activities associated with the Loch Lomond Scenario would be required to comply with all applicable regulations, including the enforcement of hazardous materials treatment, handling, notification, and transportation regulations and implementation of BMPs as required by SLVWD's construction contractor specifications. As such, the Loch Lomond Scenario would not create a significant hazard to the public through the transport, use, disposal, or release of hazardous materials and impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

- c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

San Lorenzo Valley High School, Middle School, and Elementary School are located near the Loch Lomond Scenario. The tri-campus is located at approximately 0.47 and 0.91 mile southwest of the San Lorenzo Way Bridge and Kirby Water Treatment Plant, respectively. Two private schools are in within 0.25 mile of the Kirby Water Treatment Plant; St Lawrence Academy (located 850 feet west) and Quail Hollow Montessori (located 0.25 mile south). However, long-term operation of the updated infrastructure at the Kirby Water Treatment Plant would not emit hazardous emissions, materials, or waste. As described under items 8(a) and 8(b), an accidental spill or release of hazardous or potentially hazardous materials such as vehicle and equipment fuels could occur during construction. However, implementation of SLVWD's construction contractor specifications would ensure that significant impacts would be avoided. Therefore, potential impacts associated with an accidental emission or release of hazardous materials in proximity to a school would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

- d. *Would the project be located on a site that is included on a list of hazardous material 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?*

Government Code Section 65962.5 requires the CalEPA to develop an updated Cortese List. The California Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. The analysis for this section included a review of the following resources on May 19, 2021 to provide hazardous material release information:

- SWRCB GeoTracker database
- DTSC EnviroStor database

There are no known active hazardous materials sites located within the Loch Lomond Scenario physical improvement sites. Both databases identified an open cleanup site within 0.25 mile of the San Lorenzo Way Bridge. The Valeteria Dry Cleaners operated at 6531 Highway 9 from 1960-1962. Dry cleaning solvent from Valeteria leaked from the property septic system, migrated into the soil and ground water, and eventually appeared in the San Lorenzo River. In 2002, US EPA removed the septic system, leach field and approximately 324 cubic yards of contaminated soil. However, solvent-impacted soil underneath the buildings was not removed. As of December 2007, the site was in assessment and interim remedial action with the Central Coast Regional Water Quality Control Board (RWQCB) oversight to determine the extent of soil and groundwater contamination with dry cleaning chemicals (DTSC 2021b). However, because no hazardous materials sites are located on the site and the nearby identified hazardous waste cleanup site is in remediation, impacts would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

- 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 result in a safety hazard or excessive noise for people residing or working in the project area?*

The closest public airport to the Loch Lomond Scenario is the Watsonville Municipal Airport, located approximately 17.3 miles southeast. The closest private airstrip is the Bonny Doon Airport, located approximately 3.0 and 3.10 miles northwest of the San Lorenzo Way Bridge and Kirby Water Treatment Plant, respectively. Neither of the Loch Lomond Scenario's physical improvement sites are located within an airport land use plan. Given the distance of the airport and airstrip, the proposed plan would not result in an impact to safety hazards or excessive noise for people residing or working in the area due to proximity to an airport or airstrip.

#### **NO IMPACT**

- f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

The County of Santa Cruz has published a draft Operational Area Emergency Management Plan that establishes a comprehensive, all-hazards approach to incident management for activities including prevention, preparedness, response, and recovery. The Operational Area Emergency Management Plan primarily focuses on organizational structure and chain of command and does not include policies specific to the conjunctive use plan area (County of Santa Cruz 2015). The SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not involve construction activities, as no new infrastructure is proposed under these scenarios. Therefore, this analysis focuses on the proposed Loch Lomond Scenario's potential to generally interfere with emergency response activities in the vicinity.



Construction of the Loch Lomond Scenario may require temporary lane or road closures that could impede emergency response. The Traffic Control Plan required under Mitigation Measure T-1 (see Section 17, *Transportation*) would require the implementation of safe and effective traffic control measures at the construction sites and would address any potential interference with emergency response and/or evacuation plans. Operation of the new pipelines and infrastructure proposed under the Loch Lomond Scenario would not interfere with emergency response because the pipelines would be underground or suspended under a bridge. With implementation of the Traffic Control Plan, potential impacts related to the impairment of implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan would be less than significant with mitigation incorporated.

#### **LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

*g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?*

According to the California Department of Forestry and Fire Protection (CAL FIRE), both the San Lorenzo Way Bridge and Kirby Water Treatment Plant sites are in the Moderate Fire Hazard Severity Zone in the State Responsibility Area. The nearest fire station, Felton Fire Protection District, is located on Pine Street approximately 0.44 mile south of the San Lorenzo Way Bridge location and approximately 475 feet east of the Kirby Water Treatment Plant. Additionally, CAL FIRE's San Mateo Santa Cruz Unit (CZU) Headquarters is located at 6059 Highway 9, roughly 0.60 mile and 750 feet from the San Lorenzo Way Bridge location and the Kirby Water Treatment Plant, respectively. As discussed in the *Project Description*, the CZU Lightning Complex fires burned portions of the conjunctive use plan area in August 2020, damaging the surface water intakes at Foreman Creek, Peavine, Clear Creek, and Sweetwater Creek, which would be utilized by the plan.

During construction activities, the use of spark-producing construction machinery within or adjacent to areas of moderate and high fire hazard could potentially create hazardous fire conditions and expose people to wildfire risks. However, implementation of Mitigation Measure HAZ-1 would reduce impacts related to potential risk of loss, injury, or death associated with wildland fires to a less than significant level. Operation of the Conjunctive Use Plan would not increase the population or introduce any infrastructure or operations that would potentially increase the risk of loss, injury, or death associated with wildland fires. Therefore, this impact would be less than significant with mitigation incorporated.

#### **Mitigation Measure**

With implementation of the following mitigation measure, potential impacts related to wildland fires would be reduced to less than significant levels.

##### *HAZ-1 Prevention of Fire Hazards during Construction*

Prior to construction and during the duration of construction activities associated with the Loch Lomond Scenario, the contractor and construction crews shall be required to implement wildfire reduction strategies including the following:

- Clear staging areas, welding areas, and areas designated for construction of dried vegetation and other materials that could ignite
- Ensure construction equipment with spark arrestors shall be maintained in good working order

**Conjunctive Use Plan for the San Lorenzo River Watershed**

- Ensure construction equipment, including those with hot vehicle catalytic converters, shall be kept in good working order and used only within cleared construction areas
- Require construction crews to have a spotter during welding activities to minimize potentially dangerous situations, such as accidental sparks
- Require the creation and maintenance of approved fire access roads to work in accordance with applicable fire regulations
- Require vehicles and crews to have access to functional fire extinguishers

The above requirements of construction activities would be associated with the areas surrounding the Loch Lomond Scenario, which include semi-rural and urban land uses. Implementation of Mitigation Measure HAZ-1 would reduce the exposure of people and structures, either directly or indirectly, to a significant risk of wildland fires and impacts would be reduced to less than significant.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

# 10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Would the project:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. 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;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Hydrologic Setting

### *Surface Water*

The physical infrastructure facilities associated with the proposed conjunctive use scenarios are located in the Central Coast Hydrologic Region, which covers approximately 11,300 square miles of watersheds draining to the Pacific Ocean. The Central Coast Hydrological Region includes all of Santa Cruz, Monterey, San Luis Obispo, and Santa Barbara counties, most of San Benito County, and parts of San Mateo, Santa Clara, and Ventura counties.

The proposed conjunctive use scenarios would be implemented in the San Lorenzo River Watershed. The San Lorenzo River drains a 138-square-mile watershed located in northern Santa Cruz County. It consists of a 25-mile mainstem and nine principal tributaries, including Branciforte, Carbonera, Zayante, Bean, Fall, Newell, Bear, Boulder, and Kings creeks. Loch Lomond Reservoir is a man-made lake on Newell Creek. The lake is approximately 2.5 miles long with a width of about 1,500 feet (Santa Margarita Groundwater Agency 2021).

The San Lorenzo River Watershed is under the jurisdiction of the Central Coast RWQCB (Region 3). The Central Coast RWQCB sets water quality objectives and monitors surface water quality through the implementation of the Water Quality Control Plan for the Central Coast Region (Basin Plan). The Basin Plan designates beneficial uses and water quality objectives for waters of the State in the Central Coast Region. These beneficial uses serve as the basis for establishing water quality objectives and discharge prohibitions to protect water quality (Central Coast RWQCB 2019).

Table 7 summarizes the beneficial uses of surface waters in the plan area.

**Table 7 Beneficial Uses for Surface Waters in Plan Area**

<b>Water Body</b>	<b>Beneficial Uses</b>
San Lorenzo River	MUN, AGR, IND, GWR, REC1, REC2, WILD, COLD, MIGR, SPWN, BIOL, RARE, FRSH, COMM
Branciforte Creek	MUN, AGR, GWR, REC1, REC2, WILD, COLD, MIGR, SPWN, COMM
Carbonera Creek	MUN, AGR, IND, GWR, REC1, REC2, WILD, COLD, MIGR, SPWN, COMM
Zayante Creek	MUN, AGR, IND, GWR, REC1, REC2, WILD, COLD, MIGR, SPWN, COMM
Bean Creek	MUN, AGR, IND, GWR, REC1, REC2, WILD, COLD, MIGR, SPWN, COMM
Fall Creek	MUN, AGR, IND, GWR, REC1, REC2, WILD, COLD, MIGR, SPWN, BIOL, COMM
Newell Creek	MUN, AGR, IND, GWR, REC1, REC2, WILD, COLD, MIGR, SPWN, FRSH, POW, COMM
Bear Creek	MUN, AGR, GWR, REC1, REC2, WILD, COLD, MIGR, SPWN, COMM
Boulder Creek	MUN, AGR, GWR, REC1, REC2, WILD, COLD, MIGR, SPWN, COMM
Kings Creek	MUN, GWR, REC1, REC2, WILD, COLD, MIGR, SPWN, BIOL, COMM

Water Body	Beneficial Uses
Loch Lomond Reservoir	MUN, AGR, IND, GWR, REC1, REC2, WILD, COLD, WARM, MIGR, SPWN, RARE, FRSH, NAV, COMM, SHELL
<p>MUN = Municipal and Domestic Supply; AGR = Agricultural Supply; IND = Industrial Service Supply; GWR = Groundwater Recharge; REC1 = Water Contact Recreation; REC2 = Non-Contact Water Recreation; WILD = Wildlife Habitat; COLD = Cold Fresh Water Habitat; WARM = Warm Fresh Water Habitat; MIGR = Migration of Aquatic Organisms; SPWN = Spawning, Reproduction, and/or Early Development; BIOL = Preservation of Biological Habitats of Special Significance; RARE = Rare, Threatened, or Endangered Species; FRSH = Fresh Water Replenishment; POW = Hydropower Generation; COMM = Commercial and Sport Fishing; NAV = Navigation; SHELL = Shellfish Harvesting</p> <p>Source: Central Coast RWQCB 2019</p>	

### Groundwater

Portions of the District’s service area and the physical infrastructure facilities associated with the conjunctive use scenarios overlie the SMGB. The SMGB supplies an average of 1,044 AFY to the District (Santa Margarita Groundwater Agency 2021). The District produces groundwater from three clusters of active wells (the Quail Hollow, Olympia, and Pasatiempo wellfields), and from a single active Mañana Woods well. The Quail Hollow and Olympia wells supply water to the North System in conjunction with stream diversions. The Pasatiempo and Mañana Woods wells supply the entire water needs of the South System (SLVWD 2016).

The SMGB also supplies water to the Scotts Valley Water District, Mount Hermon, small water companies, commercial and agricultural users, and private residential wells. Approximately 40 to 50 percent of the San Lorenzo River baseflow is from the SMGB (Santa Margarita Groundwater Agency 2021).

The aquifers that comprise the SMGB have been managed as a distinct groundwater resource since the early 1990s. The basin has been managed under an AB 3030 Groundwater Management Plan since 1994. On September 16, 2014, the Governor signed the Sustainable Groundwater Management Act (SGMA). SGMA provides a framework for sustainable management of groundwater supplies by local authorities. The basin is currently managed by the Santa Margarita Groundwater Agency, which consists of representatives from the District as well as the Scotts Valley Water District and the County of Santa Cruz. The Santa Margarita Groundwater Agency is in the process of developing a Groundwater Sustainability Plan for the basin, with a SGMA deadline of January 2022 (Santa Margarita Groundwater Agency 2021).

### Flood Hazards

According to the Federal Emergency Management Agency (FEMA), the mainstem of the San Lorenzo River is a regulatory floodway (FEMA 2012).

The Loch Lomond Scenario physical improvements would include the installation of a new raw water pipeline across the San Lorenzo River, suspended under the San Lorenzo Way bridge. According to FEMA, the segment of the San Lorenzo River crossed by the San Lorenzo Way bridge is designated “Floodway Areas in Zone AE.” FEMA defines “Zone AE” as a special flood hazard area subject to flooding by the one percent annual flood (i.e., a flood of that magnitude has a one percent chance of occurring in any given year). FEMA defines “Floodway Areas in Zone AE” as “the channel of a stream plus any adjacent floodplain areas that must be kept free to encroachment so that the one percent annual chance flood can be carried without substantial increases in flood heights” (FEMA 2012). No other physical improvements associated with the Loch Lomond Scenario

are in a mapped flood hazard area. The other two scenarios would not involve physical improvements, and therefore would not involve new facilities in a mapped flood hazard area.

- a. *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

## **Construction**

Grading, excavation, and other construction activities associated with the Loch Lomond Scenario physical improvements could adversely affect water quality due to erosion resulting from exposed soils and the generation of water pollutants, including trash, construction materials, and equipment fluids. Soil disturbance associated with site preparation and grading activities would result in looser, exposed soils, which are more susceptible to erosion. Additionally, spills, leakage, or improper handling and storage of substances such as oils, fuels, chemicals, metals, and other substances from vehicles, equipment, and materials used during project construction could contribute to stormwater pollutants or leach to underlying groundwater.

Construction activities would be subject to the National Pollutant Discharge Elimination System (NPDES) *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit)* (Order 2009-0009, as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). Compliance with the Construction General Permit is required for projects that result in more than one acre of ground disturbance, including through clearing, grading, grubbing, excavating, stockpiling, and removing or replacing existing facilities. The *Construction General Permit* requires the development of a SWPPP and minimum BMPs for stormwater control based on the risk level of the site. BMPs may include but would not be limited to use of tarps on stockpiled soil, proper waste disposal procedures, sweeping of site debris, and periodic inspection of the site. The construction SWPPP and BMPs would be designed to prevent sedimentation of both on-site and off-site surface waters from construction activities; prevent leaking of pollutants such as oil, grease, and chemicals; and implement spill control and response measures in the case of accidental releases.

Section 01560 Part 1.08 of the SLVWD construction contractor specifications also requires contractors to implement effective wind erosion control measures and to provide effective soil cover for inactive areas and all finished slopes, open space, utility backfill, and completed areas. Contractors must also establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site. Furthermore, contractors must effectively manage all run-on from off the site, all runoff within the site, and all runoff that discharges off the site. Run-on from off the site must be directed away from all disturbed areas.

Pursuant to compliance with the above requirements, construction activities associated with the Loch Lomond Scenario would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. The remaining two scenarios would not involve construction activities. Construction-related impacts would be less than significant.

## **Operation**

Following construction of the Loch Lomond Scenario improvements, the ground surface would be restored to existing conditions. As such, physical improvements associated with the Loch Lomond

Scenario would not increase impervious surface areas, thereby increasing stormwater runoff flows which could introduce pollutants to nearby water bodies.

As discussed in the *Project Description*, implementation of the conjunctive use scenarios would allow more flexibility to divert surface flows during the winter and spring (peak flow season) and/or provide in-lieu groundwater recharge to improve surface flows during the summer (low flow season). As such, implementation of the scenarios would alter the volume of surface water flows at different times of year; however, this would not generate water pollutants, provide polluted runoff, or increase stormwater runoff flows to surface water or groundwater bodies, including San Lorenzo River, its tributaries, and the SMGB. In addition, due to the small changes in streamflow volume relative to the natural capacity of the channel, implementation of the scenarios would not significantly alter the concentrations of existing pollutants in affected surface water bodies.

The conjunctive use scenarios would not introduce new discharges of water into surface or groundwater bodies; rather, they would utilize existing diversion facilities, existing conveyance facilities, and proposed conveyance and storage facilities to alter the amount of water diverted from surface waters at different times of year. This, in turn, would affect groundwater pumping regimes at existing groundwater production facilities. As such, the scenarios would not introduce pollutants to nearby water bodies. Proposed changes to surface flows would not degrade water quality such that implementation of the scenarios would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

As such, operational impacts associated with the proposed conjunctive use scenarios would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

- 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?*

As discussed above, proposed infrastructure associated with the Loch Lomond Scenario would not increase impervious surface areas, as they improvements would occur entirely within existing paved areas, or as part of an existing bridge replacement project. As such, the Loch Lomond Scenario would not introduce impervious surface areas which could interfere substantially with groundwater recharge.

As discussed in the *Project Description*, the main purpose of the plan is to optimize the conjunctive use of surface and groundwater sources to improve aquatic habitat and water supply reliability within the San Lorenzo River watershed. Implementation of the conjunctive use scenarios would allow more flexibility to divert surface flows during the winter and spring (peak flow season) and/or provide in-lieu groundwater recharge to improve surface flows during the summer (low flow season). For example, the North System Diversions Scenario is estimated to result in an overall 32 percent reduction in South System groundwater pumping. Under the Loch Lomond Scenario, the South System's use of Loch Lomond Reservoir water would result in a simulated 67 percent reduction in groundwater pumping from the Pasatiempo wells (Podlech 2019). Consequently, the proposed conjunctive use scenarios would provide a beneficial impact related to groundwater supplies and groundwater recharge, as they would reduce groundwater pumping.

No adverse impact related to groundwater supplies or groundwater recharge would occur.

#### **NO IMPACT**

- c.(i) 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 result in substantial erosion or siltation on- or off-site?*

## **Construction**

Construction activities associated with the Loch Lomond Scenario would occur in previously disturbed, paved areas. Construction activities would temporarily alter the existing drainage pattern of the area through the short-term staging and use of construction equipment and materials. However, these temporary drainage pattern alterations would not increase the rate or amount of surface runoff, as they would not introduce new impervious surfaces to the Loch Lomond Scenario physical improvements area. As such, construction activities would not result in flooding on- or off-site, nor would they exceed the capacity of existing or planned stormwater drainage systems.

Construction activities associated with the Loch Lomond Scenario could introduce additional pollutants and sediment into stormwater runoff via spills, leakage, or improper handling and storage of substances such as oils, fuels, chemicals, metals, and other substances from vehicles, equipment, and materials used during project construction. As discussed under item a, construction activities would be required to comply with the Construction General Permit and implement a SWPPP, which would include BMPs to minimize erosion, siltation, and polluted runoff. In addition, construction activities would incorporate BMPs and erosion controls in compliance with the Santa Cruz County Municipal Code and standard District construction specifications. With implementation of these required measures, potential construction impacts to erosion, siltation, and polluted runoff associated with drainage pattern alterations would be less than significant.

The mainstem of the San Lorenzo River is a regulatory floodway. Under the Loch Lomond Scenario, construction of the proposed suspended raw water pipeline under the San Lorenzo Way bridge would occur in a flood hazard zone designated "Floodway Areas in Zone AE" (FEMA 2012). As discussed in the 2014 San Lorenzo Way Bridge Replacement Project IS-MND, the bridge replacement project will be designed to not impede or redirect flood flows within a 100-year flood hazard area (County of Santa Cruz 2014). Construction activities associated with the suspended raw water pipeline would not impede or redirect flood flows.

Construction-related impacts related to drainage patterns would be less than significant.

## **Operation**

Implementation of the proposed scenarios would very slightly alter the volume of surface water flows at different times of year. For example, the 32 percent reduction in South System groundwater pumping simulated for the North System Diversions Scenario is estimated to increase the percentage of drought baseflow remaining as a result of assumed groundwater pumping effects by four percent in Bean Creek at the Zayante Creek confluence, three percent in Zayante Creek at the San Lorenzo River confluence, and one percent in the San Lorenzo River at SLRBT compared to existing baseline conditions. These estimated increases in drought baseflows are modest (approximately 0.1 cfs).

However, operation of the proposed conjunctive use scenarios would not alter the existing drainage pattern of the area or alter the course of a stream or river. The SLRBT Low-Flow Requirements Modification Scenario and North System Diversions Scenario would utilize existing diversion facilities to divert surface flows. The Loch Lomond Scenario would introduce new water conveyance



infrastructure to connect the Newell Creek pipeline and the Felton raw water system, which would not alter the course of a stream or river. Upon completion of construction, the ground surface would be restored to existing conditions and drainage patterns would remain the same as existing conditions.

In addition, the proposed scenarios would not alter surface flows in a manner which would: result in substantial erosion or siltation; substantially increase the rate or amount of surface runoff in a manner which would result in flooding; 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; or impede or redirect flood flows. Due to the small changes in streamflow volume relative to the natural capacity of the channel, the proposed seasonal changes in surface water flows would not result in substantial erosion, siltation, or flooding. The Water Availability Assessment prepared for the various scenarios (Appendix A) calculated potentially divertible flows accounting for both required minimum bypass flows as well as diversion capacities and limitations associated with high flows (e.g., elevated turbidity and the potential for storm damage). As such, the diversion volumes proposed under the various conjunctive use scenarios account for limitations associated with high flows, including the potential for erosion and siltation caused by storm damage. In addition, as discussed under item a, operation of the proposed scenarios would not generate water pollutants or provide polluted runoff.

The mainstem of the San Lorenzo River is a regulatory floodway (FEMA 2012). The proposed changes to surface water flows under the conjunctive use scenarios would not impede the San Lorenzo River's function as a floodway, nor would they redirect flood flows. The proposed new raw water pipeline crossing San Lorenzo River would be suspended under San Lorenzo Way bridge and would be constructed as part of the San Lorenzo Way Bridge Replacement Project. As described in the 2014 San Lorenzo Way Bridge Replacement Project IS-MND, both the existing and proposed bridges are above the design 100-year water surface elevation of the San Lorenzo River in the vicinity of the bridge (County of Santa Cruz 2014). As such, the proposed suspended pipeline associated with the Loch Lomond Scenario would not impede or redirect flood flows.

Given that the project would preserve existing drainage patterns, would not alter the course of a stream or river, and would not divert or redirect flood flows, potential impacts related to the alteration of the site's drainage pattern would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

*c.(ii) 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

#### **Construction**

Construction activities associated with the Loch Lomond Scenario would occur in previously disturbed, paved areas. Construction activities would temporarily alter the existing drainage pattern of the area through the short-term staging and use of construction equipment and materials. However, these temporary drainage pattern alterations would not increase the rate or amount of surface runoff, as they would not introduce new impervious surfaces to the Loch Lomond Scenario physical improvements area. As such, construction activities would not result in flooding on- or off-site. Construction-related impacts would be less than significant.

## **Operation**

Implementation of the proposed scenarios would very slightly alter the volume of surface water flows at different times of year. For example, the 32 percent reduction in South System groundwater pumping simulated for the North System Diversions Scenario is estimated to increase the percentage of drought baseflow remaining as a result of assumed groundwater pumping effects by four percent in Bean Creek at the Zayante Creek confluence, three percent in Zayante Creek at the San Lorenzo River confluence, and one percent in the San Lorenzo River at SLRBT compared to existing baseline conditions. These estimated increases in drought baseflows are modest (approximately 0.1 cfs).

However, operation of the proposed conjunctive use scenarios would not alter the existing drainage pattern of the area or alter the course of a stream or river. The SLRBT Low-Flow Requirements Modification Scenario and North System Diversions Scenario would utilize existing diversion facilities to divert surface flows. The Loch Lomond Scenario would introduce new water conveyance infrastructure to connect the Newell Creek pipeline and the Felton raw water system, which would not alter the course of a stream or river. Upon completion of construction, the ground surface would be restored to existing conditions and drainage patterns would remain the same as existing conditions.

In addition, the proposed scenarios would not alter surface flows in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding. Due to the small changes in streamflow volume relative to the natural capacity of the channel, the proposed seasonal changes in surface water flows would not result in substantial flooding.

The mainstem of the San Lorenzo River is a regulatory floodway (FEMA 2012). The proposed changes to surface water flows under the conjunctive use scenarios would not impede the San Lorenzo River's function as a floodway. The proposed new raw water pipeline crossing San Lorenzo River would be suspended under San Lorenzo Way bridge and would be constructed as part of the San Lorenzo Way Bridge Replacement Project. As described in the 2014 San Lorenzo Way Bridge Replacement Project IS-MND, both the existing and proposed bridges are above the design 100-year water surface elevation of the San Lorenzo River in the vicinity of the bridge (County of Santa Cruz 2014). As such, the proposed suspended pipeline associated with the Loch Lomond Scenario would not result in flooding on- or off-site.

Operational impacts would be less than significant.

### **LESS THAN SIGNIFICANT IMPACT**

*c.(iii) 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 that would 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?*

## **Construction**

As discussed under item c(ii), construction activities associated with the Loch Lomond Scenario would occur in previously disturbed, paved areas. Construction activities would temporarily alter the existing drainage pattern of the area through the short-term staging and use of construction equipment and materials. However, these temporary drainage pattern alterations would not

increase the rate or amount of surface runoff, as they would not introduce new impervious surfaces to the Loch Lomond Scenario physical improvements area. As such, construction activities would not exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Construction activities associated with the Loch Lomond Scenario could introduce additional pollutants and sediment into stormwater runoff via spills, leakage, or improper handling and storage of substances such as oils, fuels, chemicals, metals, and other substances from vehicles, equipment, and materials used during project construction. As discussed under item a, construction activities would be required to comply with the Construction General Permit and implement a SWPPP, which would include BMPs to minimize erosion, siltation, and polluted runoff. In addition, construction activities would incorporate BMPs and erosion controls in compliance with the Santa Cruz County Municipal Code and standard District construction specifications. With implementation of these required measures, potential construction impacts to erosion, siltation, and polluted runoff associated with drainage pattern alterations would be less than significant.

Construction-related impacts would be less than significant.

## **Operation**

As discussed under item c(ii), implementation of the proposed scenarios would very slightly alter the volume of surface water flows at different times of year. However, operation of the proposed conjunctive use scenarios would not alter the existing drainage pattern of the area or alter the course of a stream or river. The SLRBT Low-Flow Requirements Modification Scenario and North System Diversions Scenario would utilize existing diversion facilities to divert surface flows. The Loch Lomond Scenario would introduce new water conveyance infrastructure to connect the Newell Creek pipeline and the Felton raw water system, which would not alter the course of a stream or river. Upon completion of construction, the ground surface would be restored to existing conditions and drainage patterns would remain the same as existing conditions.

Due to the small changes in streamflow volume relative to the natural capacity of the channel, the proposed seasonal changes in surface water flows would not increase erosion or siltation. The Water Availability Assessment prepared for the various scenarios (Appendix A) calculated potentially divertible flows accounting for both required minimum bypass flows as well as diversion capacities and limitations associated with high flows (e.g., elevated turbidity and the potential for storm damage). As such, the diversion volumes proposed under the various conjunctive use scenarios account for limitations associated with high flows, including the potential for erosion and siltation caused by storm damage. In addition, as discussed under item a, operation of the proposed scenarios would not generate water pollutants or provide polluted runoff.

As such, the proposed scenarios would not alter surface flows in a manner which would 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. Operational impacts would be less than significant.

### **LESS THAN SIGNIFICANT IMPACT**

*c.(iv) 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 impede or redirect flood flows?*

## **Construction**

As discussed under item c(ii), construction activities associated with the Loch Lomond Scenario would occur in previously disturbed, paved areas. Construction activities would temporarily alter the existing drainage pattern of the area through the short-term staging and use of construction equipment and materials. However, these temporary drainage pattern alterations would not increase the rate or amount of surface runoff, as they would not introduce new impervious surfaces to the Loch Lomond Scenario physical improvements area. As such, construction activities would not impede or redirect flood flows.

The mainstem of the San Lorenzo River is a regulatory floodway. Under the Loch Lomond Scenario, construction of the proposed suspended raw water pipeline under the San Lorenzo Way bridge would occur in a flood hazard zone designated "Floodway Areas in Zone AE" (FEMA 2012). As discussed in the 2014 San Lorenzo Way Bridge Replacement Project IS-MND, the bridge replacement project will be designed to not impede or redirect flood flows within a 100-year flood hazard area (County of Santa Cruz 2014). Construction activities associated with the suspended raw water pipeline would not impede or redirect flood flows.

Construction-related impacts related to drainage patterns would be less than significant.

## **Operation**

As discussed under item c(ii), implementation of the proposed scenarios would very slightly alter the volume of surface water flows at different times of year. For example, the 32 percent reduction in South System groundwater pumping simulated for the North System Diversions Scenario is estimated to increase the percentage of drought baseflow remaining as a result of assumed groundwater pumping effects by four percent in Bean Creek at the Zayante Creek confluence, three percent in Zayante Creek at the San Lorenzo River confluence, and one percent in the San Lorenzo River at SLRBT compared to existing baseline conditions. These estimated increases in drought baseflows are modest (approximately 0.1 cfs).

However, operation of the proposed conjunctive use scenarios would not alter the existing drainage pattern of the area or alter the course of a stream or river. The SLRBT Low-Flow Requirements Modification Scenario and North System Diversions Scenario would utilize existing diversion facilities to divert surface flows. The Loch Lomond Scenario would introduce new water conveyance infrastructure to connect the Newell Creek pipeline and the Felton raw water system, which would not alter the course of a stream or river. Upon completion of construction, the ground surface would be restored to existing conditions and drainage patterns would remain the same as existing conditions.

The mainstem of the San Lorenzo River is a regulatory floodway (FEMA 2012). The proposed changes to surface water flows under the conjunctive use scenarios would not impede the San Lorenzo River's function as a floodway, nor would they redirect flood flows. The proposed new raw water pipeline crossing San Lorenzo River would be suspended under San Lorenzo Way bridge and would be constructed as part of the San Lorenzo Way Bridge Replacement Project. As described in the 2014 San Lorenzo Way Bridge Replacement Project IS-MND, both the existing and proposed bridges are above the design 100-year water surface elevation of the San Lorenzo River in the vicinity of the bridge (County of Santa Cruz 2014). As such, the proposed suspended pipeline associated with the Loch Lomond Scenario would not impede or redirect flood flows. Operational impacts would be less than significant.

## **LESS THAN SIGNIFICANT IMPACT**

- d. *In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?*

As discussed above, the mainstem of the San Lorenzo River is a regulatory floodway. Under the Loch Lomond Scenario, the proposed suspended raw water pipeline under the San Lorenzo Way bridge would be in a flood hazard zone designated “Floodway Areas in Zone AE” (FEMA 2012). As such, the suspended raw water pipeline may be subject to inundation in a flood. However, the raw water pipeline would contain untreated surface water supplies from Loch Lomond, and would not contain constituents which would risk release of pollutants. Loch Lomond is fed by Newell Creek, which is tributary to San Lorenzo River. As such, in the event of project inundation and pipeline rupture, the Loch Lomond water released from the pipeline would be similar in quality to the receiving San Lorenzo River water. As such, the pipeline would not risk release of pollutants due to project inundation.

None of the other physical improvements proposed under the Loch Lomond Scenario are located in a flood hazard, tsunami, or seiche zone. The physical improvements area is located approximately seven miles from the Pacific Ocean and approximately three miles from the nearest inland surface water body, Loch Lomond Reservoir. Given the distance to these water bodies, the physical improvements area would not be subject to inundation by tsunami or seiche.

Consequently, no impact related to risk of release of pollutants due to project inundation would occur.

**NO IMPACT**

- e. *Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

The Central Coast RWQCB sets water quality objectives and monitors surface water quality through the implementation of the Basin Plan. The Basin Plan designates beneficial uses and water quality objectives for waters of the State in the Central Coast Region. As discussed under item a, construction activities associated with the Loch Lomond Scenario would be required to comply with the NPDES Construction General Permit. The Construction General Permit requires the development of a SWPPP and minimum BMPs for stormwater control based on the risk level of the site. In addition, construction activities would comply with local municipal code requirements governing stormwater runoff and the minimum control measures and BMPs contained therein. Compliance with applicable regulations discussed above, including the NPDES permit, and implementation of construction BMPs would protect surface water quality and minimize potential construction impacts to beneficial uses of local surface waters. As discussed under item a, operational changes to surface flows under the proposed conjunctive use scenarios would not violate water quality objectives or adversely impact beneficial uses. Therefore, the proposed conjunctive use scenarios would not conflict with or obstruct implementation of the Basin Plan. No impact would occur.

The Santa Margarita Groundwater Agency is currently in the process of developing a Groundwater Sustainability Plan for the SMGB, with a SGMA deadline of January 2022 (Santa Margarita Groundwater Agency 2021). As discussed under item b, the proposed conjunctive use scenarios would provide a beneficial impact related to groundwater supplies and groundwater recharge. As such, the proposed scenarios would not conflict with or obstruct implementation of sustainable groundwater management planning efforts. No adverse impact would occur.

**NO IMPACT**

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# 11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*a. Would the project physically divide an established community?*

The SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not involve construction activities, as no new infrastructure is proposed under these scenarios.

Land uses surrounding the Loch Lomond Scenario physical improvements area are predominantly residential. Construction staging would occur adjacent to the proposed pipeline locations. The presence of construction equipment and workers would temporarily change the existing character of the site vicinity to that of a construction zone. However, construction staging would maintain local access for businesses and residences near the proposed pipeline and Kirby Water Treatment Plant. In addition, construction would be short-term with standard one-way traffic controls implemented during normal daily construction. Therefore, construction of the proposed Loch Lomond Scenario physical improvements would not physically divide an established community. In addition, operation of all three conjunctive use scenarios would not physically divide an established community because they would not construct new land uses or infrastructure that would partition or block access to existing communities. Accordingly, no impact would occur.

**NO IMPACT**

*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?*

The proposed Conjunctive Use Plan would involve water infrastructure improvements that would result in enhanced system reliability. The County of Santa Cruz Felton Specific Plan was adopted in 1987 to establish design and development guidelines for the village center of Felton. It is used to guide and coordinate future public and private developments in the Town. The goals of the Specific Plan are to preserve the unique characteristics of the Town while providing a planning framework to guide and promote economic viability and coherent community design (County of Santa Cruz 1987). The Felton Specific Plan does not include any objectives, policies, or programs related to the provision of water supplies or water infrastructure.

The Parks, Recreation, and Public Facilities Element of the County of Santa Cruz GP/LCP includes the following objectives and policies related to water systems and water conservation (County of Santa Cruz 1994):

**Objective 7.18a. Domestic Water Service.** To ensure a dependable supply of high quality domestic water to meet the needs of communities that obtain water service from municipal water systems, County water districts and small water systems.

**Objective 7.18c. Water Conservation.** To maximize the County's water conservation potential through a coordinated program with water purveyors and water management agencies involving public education, financial incentives to conserve, voluntary and mandatory conservation measures, retrofit programs, run-off management and water waste regulations and enforcement.

**Policy 7.18.4. Improvement of Water Systems.** Support water system improvement programs for storage, treatment and distribution facilities to meet necessary water supply and fire suppression requirements.

**Policy 7.18.6. Water Conservation Requirements.** Utilize the best available methods for water conservation in new developments. Work with all water purveyors to implement demand management programs and water conservation measures. In areas where shortage or groundwater overdraft has been substantiated by the water purveyor, require water conservation measures for new and existing uses. Require the use of water-saving devices such as ultra-low-flow fixtures and native drought-resistant planting in new development projects to promote ongoing water conservation.

Consistent with the GP/LCP objectives and policies, the purpose of the proposed Conjunctive Use Plan is to optimize the conjunctive use of surface and groundwater sources to improve aquatic habitat and water supply reliability within the San Lorenzo River watershed. Operation of the proposed scenarios have the potential to improve water rights compliance, instream flows, and groundwater storage. The proposed conjunctive use scenarios would not conflict with an applicable land use plan, policy, or regulation and are supported by policies in the County of Santa Cruz GP/LCP. No impact would occur.

**NO IMPACT**



# 12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?*

The Conservation and Open Space Element of County of Santa Cruz GP/LCP recognizes State classification and designation of mineral resource areas (County of Santa Cruz 1994). The Conjunctive Use Plan physical improvement areas do not contain any mapped mineral resource areas (CGS 2021). In addition, the plan area is not currently used for mineral resource extraction, and implementation of the scenarios would not change land uses in these areas. Consequently, the proposed plan would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site. Therefore, no impact associated with mineral resources would occur.

**NO IMPACT**

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?*

As discussed under item a, the plan area is not currently used for mineral resource extraction, and implementation of the scenarios would not change land uses in these areas. Consequently, the proposed plan would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site. Therefore, no impact associated with mineral resources would occur.

**NO IMPACT**

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# 13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Overview of Noise and Vibration

### Noise

The unit of measurement used to describe a noise level is the decibel (dB). However, the human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, a method called “A weighting” is used to filter noise frequencies that are not audible to the human ear. A-weighting approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the “A-weighted” levels of those sounds. Therefore, the A-weighted noise scale is used for measurements and standards involving the human perception of noise. In this analysis, all noise levels are A-weighted, and “dBA” is understood to identify the A-weighted decibel.

Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. A 10 dB increase represents a 10-fold increase in sound intensity, a 20 dB change is a 100-fold difference, 30 dB is a 1,000-fold increase, etc. Thus, a doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the energy would result in a 3 dB decrease.

Human perception of noise has no simple correlation with acoustical energy. The perception of noise is not linear in terms of dBA or in terms of acoustical energy. Two equivalent noise sources combined do not sound twice as loud as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease; that a change of 5 dBA is readily perceptible; and that an increase (decrease) of 10 dBA sounds twice (half) as loud (California Department of Transportation [Caltrans] 2013).

### *Descriptors*

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors has been developed. The noise descriptors used for this analysis are the one-hour equivalent noise level ( $L_{eq}$ ) and the community noise equivalent level (CNEL).

- The  $L_{eq}$  is the level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound. For example,  $L_{eq(1h)}$  is the equivalent noise level over a 1-hour period and  $L_{eq(8h)}$  is the equivalent noise level over an 8-hour period.  $L_{eq(1h)}$  is a common metric for limiting nuisance noise whereas  $L_{eq(8h)}$  is a common metric for evaluating construction noise.
- The CNEL is a 24-hour equivalent sound level. The CNEL calculation applies an additional 5 dBA penalty to noise occurring during evening hours, between 7:00 p.m. and 10:00 p.m., and an additional 10 dBA penalty is added to noise occurring during the night, between 10:00 p.m. and 7:00 a.m. These increases for certain times are intended to account for the added sensitivity of humans to noise during the evening and night.

### *Propagation*

Sound from a small, localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern, known as geometric spreading. The sound level decreases or drops off at a rate of 6 dBA for each doubling of the distance. Traffic noise is not a single, stationary point source of sound. Over some time interval, the movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point. The drop-off rate for a line source is 3 dBA for each doubling of distance.

The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site (such as parking lots or smooth bodies of water) receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) are simply the geometric spreading of the source. A soft site (such as soft dirt, grass, or scattered bushes and trees) receives an additional ground attenuation value of 1.5 dBA per doubling of distance.

### *Groundborne Vibration*

Vibration levels are usually expressed as a single-number measure of vibration magnitude, in terms of velocity or acceleration, which describes the severity of the vibration without the frequency variable. The peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak of the vibration signal, usually measured in inches per second. Since it is related to the stresses that are experienced by buildings, PPV is often used in monitoring and controlling construction vibration. Although PPV is appropriate for evaluating the potential of building damage, it is not suitable for evaluating human response. It takes some time for the human body to respond to vibrations. In a sense, the human body responds to an average vibration amplitude (Federal

Transit Administration [FTA] 2018). Because vibration waves are oscillatory, the net average of a vibration signal is zero. Thus, the root mean square (RMS) amplitude is used to describe the "smoothed" vibration amplitude (FTA 2018). The RMS of a signal is the square root of the average of the squared amplitude of the signal, usually measured in inches per second. The average is typically calculated over a one-second period. The RMS amplitude is always less than the PPV and is always positive. Decibel notation is used to compress the range of numbers required to describe vibration. The abbreviation VdB is used in this analysis for vibration decibels to reduce the potential for confusion with sound decibels.

Continued vibration of building components can also take the form of an audible low-frequency rumbling noise, which is referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hertz), or when foundations or utilities, such as sewer and water pipes, connect the structure and the vibration source.

### **Regulatory Setting**

Pursuant to Section 50391 of the California Code of Regulations, building and zoning ordinances do not apply to the "location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency." The proposed project involves the storage and transmission of potable water supplies, and is therefore exempt from local building and zoning ordinances, including the Santa Cruz County Noise Ordinance. Nevertheless, SLVWD as the lead agency has chosen to use the noise level limits in the Santa Cruz County Noise Ordinance as the thresholds of significance for the purposes of evaluating the project's operational impacts under CEQA in accordance with CEQA Guidelines Section 15064.7(c).

#### *County of Santa Cruz General Plan Public Safety and Noise Element*

The Public Safety and Noise Element of the County of Santa Cruz GP/LCP contains the following policy that pertains to construction noise:

**Policy 9.2.6. Construction Noise.** Require mitigation and/or best management practices to reduce construction noise as a condition of project approvals, particularly if noise levels would exceed 75 dBA at neighboring sensitive land uses or if construction would occur for more than 7 days.

#### *Santa Cruz County Noise Ordinance*

Chapter 8.30 of the Santa Cruz County Code states that no person shall make, cause, suffer, or permit to be made any offensive noise, which can include construction noise (County of Santa Cruz 2017d). According to Section 8.30.010(C)(1)(a), noise that occurs during daytime and evening hours (8:00 a.m. to 10:00 p.m.) is considered to be offensive if one or more of the following occurs:

- Noise is clearly discernable at a distance of 150 feet from the property line of the property from which the sound is broadcast
- Noise is in excess of 75 dBA at the property line of the property from which the sound is broadcast

Section 13.15.040(A) states exemptions from the County Code for noise sources associated with construction, repair, remodeling, or grading of any real property, provided a permit has been obtained from the County as required, and said activities take place between the hours of 8:00 a.m. and 5:00 p.m. on weekdays.

Furthermore, Section 13.15.040(G) states that the provisions of the County Code noise standards shall not apply to construction, maintenance, and repair operations conducted by public agencies and/or utility companies or their contractors which are deemed necessary to serve the best interests of the public.

- 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?*

Under the Loch Lomond Scenario, SLVWD would construct new raw water pipelines, tie-ins, and improvements to the Kirby Water Treatment Plant in Felton that would bolster system reliability and efficiency. Construction activities would generate temporary construction noise associated with site preparation, grading/trenching, pipeline construction/installation, and paving. The nearest sensitive receptors to the new raw water pipeline location are residential parcels along Clearview Place and Cooper Street located approximately 15 feet away from the roadway centerline to the nearest residential property line. The nearest sensitive receptors to the Kirby Water Treatment Plant are residential parcels along Kirby Street located approximately 150 feet from the center of footprint of the treatment plant.

Construction noise at nearby sensitive receptors was modeled using the Federal Highway Administration’s (FHWA) Roadway Construction Noise Model (RCNM). Equipment for each phase of project construction was based on a construction equipment list provided by SLVWD. Table 8 summarizes the maximum construction noise levels at the nearest sensitive receptor for the new raw water pipeline and tie-in locations. This analysis conservatively assumes that multiple pieces of construction equipment would be operating simultaneously during each phase of construction, and that there would not be any obstructions to line-of-sight that would further attenuate construction noise. Staggered operation of equipment would further reduce construction related noise.

**Table 8 Maximum Construction Noise Levels by Construction Phase**

Construction Phase	Anticipated Equipment	Estimated Noise at Nearest Sensitive Receptors (dBA Leq)	
		Raw Water Pipeline <sup>1</sup>	Kirby Water Treatment Plant <sup>2</sup>
Demolition	Concrete Saw, Compressor, Excavator, Loader	95	75
Site Preparation	Backhoe, Compactor, Compressor, Excavator	92	72
Pipeline Installation and Construction	Concrete Saw, Compactor, Compressor, Crane, Excavator	95	75
Paving	Grader, Loader, Paver, Roller, Scraper	95	75

See Appendix H for RCNM data sheets.

<sup>1</sup>Nearest sensitive receptors are residential properties along Clearview Place and Cooper Street, approximately 15 feet from the roadway centerline to the nearest residential property line.

<sup>2</sup>Nearest sensitive receptors are residential properties along Kirby Street, approximately 150 feet from project site.

As shown in Table 8, construction noise could be as high as approximately 95 dBA Leq at residential property lines near the raw water pipeline location and 75 dBA Leq at residential property lines near the Kirby Water Treatment Plant location. Therefore, construction noise would exceed the 75 dBA Santa Cruz County Code daytime noise standard at the nearest sensitive receptors located near the proposed raw water pipeline project location.

Construction noise would be temporary in nature. Because the proposed project involves installation of a linear pipeline, the active construction area would be continuously moving along the length of the alignment as each segment is installed. As such, the active construction area would not typically be in the same location for more than five days. Furthermore, construction activities would be in accordance with the County's Noise Ordinance, which lists permitted construction activities as an example of necessary noise when considering whether a violation of the Noise Ordinance exists. In addition, Project Design Features included in the Project Description require the installation of equipment shielding and mufflers to reduce construction noise. Installation of sound shielding and use of industrial grade mufflers have been proven to reduce noise levels by at least 20 dBA at 50 feet (see Appendix H for manufacturer equipment specifications). As shown in Table 8, the highest noise level associated with construction activity would be approximately 95 dBA Leq at residential property lines near the raw water pipeline location. Implementation of these Project Design Features would reduce construction noise by approximately 20 dBA, which would result in maximum construction noise levels of approximately 75 dBA Leq at residential property lines near the raw water pipeline location and comply with the County Code. Therefore, construction-phase noise impacts would be less than significant.

During operation, the proposed project would not result in a substantial increase in ambient noise levels. The raw water pipeline would be located entirely underground and would not result in operational noise. The proposed improvements at the Kirby Water Treatment Plant would not generate operational noise above that of the existing treatment plant. No new employees would be required, and the conjunctive use scenarios would not require additional operations and maintenance as compared to existing conditions. As such, there would not be an increase in roadway noise associated with the project, and the project would not result in a substantial permanent increase in ambient noise levels. Therefore, operational noise impacts would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

*b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

Neither the District nor the County of Santa Cruz have adopted any thresholds for construction or operational groundborne vibration impacts; therefore, the following vibration thresholds established by the Federal Transit Administration (FTA) were applied to the project (FTA 2018).

- 72 VdB for residences and buildings where people normally sleep, including hotels
- 75 VdB for institutional land uses with primary daytime use, such as churches and schools
- 94 VdB for physical damage to fragile buildings
- 98 VdB for non-engineered timber and masonry buildings
- 102 VdB for reinforced concrete steel, or timber buildings

Certain types of construction equipment can temporarily generate high levels of groundborne vibration. Construction of the Loch Lomond Scenario would potentially utilize a large bulldozer

during grading/trenching, loaded trucks during most construction phases, and a vibratory roller during the paving phase. The raw water pipeline location is within approximately 25 feet of residential structures along Clearview Place and Cooper Street in Felton and the Kirby Water Treatment Plant location is within approximately 150 feet of residential structures along Kirby Street. Table 9 shows typical vibration levels associated with standard construction equipment that could be used for the project.

**Table 9 Groundborne Vibration for Typical Construction Equipment**

Equipment	Approximate Vibration Level (VdB) at 25 Feet <sup>1</sup>	Approximate Vibration Level (VdB) at 150 Feet
Vibratory Roller	94	71
Large Bulldozer	87	64
Loaded Truck	86	64

VdB: vibration decibels  
<sup>1</sup> Distance to nearest residences along Clearview Place and Cooper Street.  
<sup>2</sup> Distance to nearest residences along Kirby Street.  
 Source: FTA 2018

As shown in Table 9, at a distance of 25 feet (i.e., distance to the nearest residence from the Loch Lomond Scenario raw water pipeline location), a vibratory roller would generate a vibration level of 94 VdB, a large bulldozer would generate a vibration level of 87 VdB, and a loaded truck would generate a vibration level of 86 VdB. Such vibration levels would exceed FTA’s recommended threshold of 72 VdB for residences during normal sleep hours, however, would not exceed 98 VdB for the potential to damage a non-engineered timber and masonry buildings. As described in the *Project Description*, construction activities would be limited to 8:00 a.m. to 6:00 p.m., Monday through Friday. Although vibration levels would exceed 72 VdB, construction activities would be limited to daytime hours and vibration impacts would not occur during normal sleep hours. In addition, as discussed under items 12(a), 12(c), and 12(d), construction vibration impacts would be temporary as the active construction site moves along the length of the pipeline alignment. Therefore, construction-related vibration impacts associated with instillation of the raw water pipeline would be less than significant.

As shown in Table 9, at a distance of 150 feet (i.e., distance to the nearest residences from the Kirby Water Treatment Plant location), a vibratory roller would generate a vibration level of 71 VdB, a large bulldozer would generate a vibration level of 64 VdB, and a loaded truck would generate a vibration level of 63 VdB. Such vibration levels would not exceed FTA’s recommend threshold of 72 VdB for residences during normal sleep hours. Therefore, construction vibration impacts to nearby residences from Kirby Water Treatment Plan upgrades would be less than significant.

The proposed SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not require new infrastructure and would not introduce new operational vibration sources. The Loch Lomond Scenario would construct raw water pipelines, which would not generate vibration; therefore, no operational vibration impacts would occur.

**LESS THAN SIGNIFICANT IMPACT**



- c. *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?*

The closest public airport to the Loch Lomond Scenario is the Watsonville Municipal Airport, located approximately 17.3 miles southeast of the project site. The closest private airstrip to the Loch Lomond Scenario is the Bonny Doon Airport, located approximately 3.1 miles north of the project site. The project site is not located within an airport land use plan or in the vicinity of a private airstrip. Therefore, the project would not expose people residing or working in the area to excessive noise related to air-traffic, and no impact would occur.

**NO IMPACT**

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# 14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 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)?*

The conjunctive use plan does not propose new homes, businesses, or other land uses which would directly generate population growth. As such, the plan would not directly induce growth.

The proposed plan involves the implementation of three conjunctive use scenarios involving existing and proposed water supply infrastructure. As discussed in the *Project Description*, the main purpose of the proposed plan is to optimize the conjunctive use of surface and groundwater sources to improve aquatic habitat and water supply reliability within the San Lorenzo River watershed. As defined therein, “conjunctive” water use refers to the coordinated use of surface water and groundwater supplies to efficiently manage water consumption and natural storage through wet- and dry-climatic conditions.

The purpose of the proposed conjunctive use scenarios is to improve water reliability to serve existing demand and improve performance reliability rather than to serve new growth. The District’s diversion volumes are limited by the treatment capacity of the Lyon Water Treatment Plant. With the current configuration of the Lyon Water Treatment Plant, the maximum diversion capacity is 1,260 gallons per minute. The proposed scenarios would not increase the maximum diversion capacity. The conjunctive use scenarios would also not expand potable water service beyond areas currently served by existing infrastructure. In addition, the proposed new infrastructure under the Loch Lomond Scenario would not increase the maximum treatment capacity of the existing Kirby Water Treatment Plant. The proposed plan would not allow development of land which previously could not be developed due to water service constraints, nor would it result in the construction of new homes or new commercial or industrial uses. As such, the proposed plan would not indirectly generate population growth.

Therefore, no impact associated with direct or indirect population growth would occur.

**NO IMPACT**

**Conjunctive Use Plan for the San Lorenzo River Watershed**

- b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

The project would not include demolition of existing housing, nor would construction activities temporarily displace existing people or housing. As such, the project would not displace people or housing and no impact related to displacement of people or housing would occur.

**NO IMPACT**

# 15 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
1 Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*a.1-5 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 fire protection, police protection, schools, parks, and/or other public facilities?*

As discussed in Section 14, *Population and Housing*, construction and operation of the proposed conjunctive use scenarios would not result in direct or indirect population growth. The Loch Lomond Scenario would include the construction of approximately 1,600 LF of new underground and suspended raw water pipeline, as well as upgrades to the existing Kirby Water Treatment Plant. However, new infrastructure would not require the construction of additional public service facilities. In addition, the SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would rely on existing facilities and would not result in the construction of new permanent facilities that would generate the need for additional fire or police protection services, schools, parks, or other public facilities. Impacts to public services would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

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# 16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?*

As discussed in Section 14, *Population and Housing*, the proposed conjunctive use scenarios would not directly or indirectly support population growth. Therefore, the proposed conjunctive use scenarios would not increase the need for or use of neighborhood and regional parks or other recreational facilities. No impact to recreational facilities would occur.

**NO IMPACT**

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?*

As discussed under item a, the proposed conjunctive use scenarios would not directly or indirectly support population growth. Therefore, the proposed conjunctive use scenarios would not increase the need for or use of neighborhood and regional parks or other recreational facilities. No impact to recreational facilities would occur.

**NO IMPACT**

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# 17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a. *Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

Neither the SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would generate significant vehicle trips as neither scenario involves construction activities or new infrastructure. The Loch Lomond Scenario proposes physical improvements that would generate construction- and operation-related vehicle trips.

Construction activities associated with the Loch Lomond Scenario physical improvements would generate construction-related vehicle trips. Temporary staging of construction equipment and materials would occur at the Kirby Water Treatment Plant. However, construction would require construction-related vehicle trips including construction workers traveling to and from the work zones and staging areas, haul trucks (including for export of excavated materials, as needed), and other trucks associated with equipment and material deliveries.

Construction is anticipated to occur from approximately April 2024 through December 2025 during the working hours of 8:00 a.m. to 6:00 p.m. Monday through Friday. No construction activities would occur on weekends or federal holidays.

The proposed physical improvements associated with the Loch Lomond Scenario would be constructed within roadways and public ROW located primarily in neighborhoods designated Suburban Residential by the Santa Cruz County General Plan. There are two transit stops located within less than 0.25 miles of the San Lorenzo Way Bridge where infrastructure improvements are proposed: Metro Stop 1529 (Viking Cottages) and Metro Stop 1527 (Hwy 9), both served by the Santa Cruz Metropolitan Transit District Line 35. The closest transit stops located near the Kirby

Water Treatment Plant are Metro Stops 1492 and 2559 (Graham Hill and Covered Bridge Road), also served by the Santa Cruz Metropolitan Transit District Line 35 (Santa Cruz Metro 2021).

Based on outputs from RCEM, construction activities would generate up to 59 worker vehicle trips per day and 59 haul trips per day. Traffic impacts during construction of the Loch Lomond Scenario physical improvements would be associated primarily with lane closures or disruptions caused by construction activity in the roadways as well as with construction-related vehicle trips by construction workers traveling to and from the site areas, soil haul trucks, and other trucks associated with equipment and material deliveries. Road closures are not anticipated; however, standard one-way traffic controls would be implemented during construction.

Traffic generated by construction workers would be spread out within the physical improvements area and would vary depending on which portion of the Loch Lomond Scenario physical improvements is under construction. Construction vehicle traffic could result in a reduction of roadway capacities due to slower movements and larger turning radii of the trucks compared to passenger vehicles. Any construction-related traffic occurring between 8:00 a.m. and 9:00 a.m. or between 4:00 p.m. and 6:00 p.m. would coincide with peak hour traffic and could temporarily impede traffic and transit flow.

Construction-related traffic impacts would be short-term and temporary at any one location because the active construction area would be continuously moving along the length of the pipeline alignment, and would cease upon completion of construction. In addition, per the SLVWD's construction contractor specifications, contractors would be responsible for basic traffic control measures to ensure the safety of vehicle traffic and material delivery, including providing flag persons at affected roadway segments and/or intersections and traffic control signage. Nonetheless, construction-related impacts to the transportation system would be potentially significant. As such, implementation of Mitigation Measure T-1 would be required to reduce construction-related traffic impacts to less than significant levels. Mitigation Measure T-1 requires construction contractors to prepare and implement a Traffic Control Plan that addresses and mitigates impacts associated with the temporary closures of traffic lanes, parking lanes, or other public ROW within the area, as necessary.

Operation of the proposed conjunctive use scenarios would not require additional O&M vehicle trips as compared to existing conditions. No new employees would be required under operation of the proposed conjunctive use scenarios. In addition, operation of the proposed plan would not interfere with the transportation system, including public transit, bicycle, and pedestrian facilities, because the proposed infrastructure improvements under the Loch Lomond Scenario would be located underground, suspended from an existing one-way bridge, or within the existing Kirby Water Treatment Plant. Operational traffic impacts would be less than significant.

## **Mitigation Measures**

The following mitigation measure would reduce temporary construction traffic impacts to a less than significant level.

### *T-1 Traffic Control Plan*

Prior to construction or the issuance of applicable permits, the contractor shall submit a Traffic Control Plan to SLVWD, the County of Santa Cruz, and any other agency with jurisdiction over roadways affected by project construction for review and approval. This plan shall:

- Describe the proposed lane closures, detours, staging areas, and routes of construction vehicles, including the timing and duration of anticipated closures.
- Describe traffic control measures that will be implemented to manage traffic and reduce potential traffic impacts in accordance with stipulations of the most recent version of the California Manual of Uniform Traffic Control Devices. Traffic control measures may include, but are not limited to, flag persons, warning signs, lights, barricades and cones to provide safe passage of vehicles (including cars and buses) and bicycle and pedestrian traffic.
- Demonstrate the location of bicycle routes and transit stops and routes, including that of Santa Cruz Metropolitan Transit District Line 35, that will be temporarily impacted by construction activities. Recommend places to temporarily relocate bicycle routes and transit stops and routes, if necessary.
- Require written notification of the timing, location, and duration of construction activities, and the location of lane closures or detours (if any) to all emergency service providers (fire and police) prior to road closure. Emergency service vehicles shall be given priority for access.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

- b. *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

CEQA Guidelines Section 15064.3(b) identifies criteria for evaluating transportation impacts. Specifically, the guidelines state vehicle miles traveled (VMT) exceeding an applicable threshold of significance may indicate a significant impact. According to Section 15064.3(b)(3) of the State CEQA Guidelines, a lead agency may include a qualitative analysis of operational and construction traffic. As discussed below, the conjunctive use scenarios are not expected to affect VMT in the plan area.

A VMT calculation is typically conducted on a daily or annual basis to determine operational usage of a project. Construction of the proposed Loch Lomond Scenario physical improvements would result in a minimal, short-term increase in local traffic as a result of construction-related worker traffic, material and equipment deliveries, and construction activities. VMT generated from construction-related traffic would cease once construction is completed, and VMT levels would return to pre-construction conditions. The SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not involve construction activities, so would not generate construction-related traffic.

Operation of all three scenarios would rely on existing staff resources and no new employees would be required. In addition, the new infrastructure proposed under the Loch Lomond Scenario would not require additional O&M vehicle trips as compared to existing conditions.

As vehicle miles generated from construction would be temporary and short term and operational use of the proposed scenarios would not increase VMT, the proposed plan would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b). Therefore, no impacts associated with VMT would occur.

**NO IMPACT**

- c. *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?*

Construction activities associated with the proposed Loch Lomond Scenario physical improvements may temporarily change the configuration of intersections and roadways within the area if lane closures are required during pipeline construction. Upon completion of construction, roadways would be re-paved and restored to existing conditions. None of the conjunctive use scenarios would include any new roadway design features, nor would they include any geometric design features; no sharp curves or dangerous intersections are proposed. Under the proposed Loch Lomond Scenario, above-ground physical improvements at the San Lorenzo Way Bridge would not pose a hazard as the new raw pipeline would be suspended from the San Lorenzo Way Bridge, which is planned for replacement by the City of Santa Cruz under a separate project. The transportation effects of which were analyzed in the 2014 San Lorenzo Way Bridge Replacement Project IS-MND (County of Santa Cruz 2014).

The proposed Conjunctive Use Plan would not create or substantially increase a traffic hazard due to a design feature, and therefore no impact would occur.

**NO IMPACT**

- d. *Would the project result in inadequate emergency access?*

Lane closures and other potential traffic impacts caused by construction activities associated with the proposed Loch Lomond Scenario could potentially impede emergency access. The Felton Fire Protection District is located approximately 0.47 mile and 447 feet from the San Lorenzo Way Bridge and Kirby Water Treatment Plant, respectively. No construction proposed under the Loch Lomond Scenario would be required in front of or adjacent to the station. Therefore, the station would not be directly affected by construction activities. The Traffic Control Plan required by Mitigation Measure T-1 would include specific traffic control measures to address emergency access routes and notify emergency service providers of road or lane closures and detours in advance. Implementation of Mitigation Measure T-1 would reduce potential construction-related impacts to emergency access to less than significant levels.

Operation of the proposed conjunctive use scenarios would not introduce new activities or operational traffic with the potential to result in inadequate emergency access. As such, operational impacts would be less than significant.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

# 18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or 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:

- |  |                          |                                     |                          |                          |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a. 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)?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

California Assembly Bill 52 of 2014 (AB 52) expanded CEQA by defining a new resource category, “tribal cultural resources.” AB 52 states, “A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (PRC Section 21084.2). It further states the lead agency shall establish measures to avoid impacts altering the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and is:

1. Listed or eligible for listing in the CRHR or in a local register of historical resources as defined in PRC section 5020.1(k), or

2. 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 PRC Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified or adopted. Under AB 52, lead agencies are required to “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” Native American tribes to be included in the process are those having requested notice of projects proposed in the jurisdiction of the lead agency.

On April 30, 2021, SLVWD mailed via certified mail AB 52 consultation letters for the proposed conjunctive use scenarios, including project information, a map, and contact information, to five Native American tribes. The tribal governments provided with an AB 52 consultation letter (via certified mail) include the following list of recipients:

- Amah Mutsun Tribal Band
- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Costanoan Ohlone Rumsen-Mutusun Tribe
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the San Francisco Bay Area

Under AB 52, Native American tribes typically have 30 days to respond and request further project information and request formal consultation. On May 25, 2021, SLVWD staff sent follow-up emails. No responses were received to the mailings or follow-up emails. Accordingly, AB 52 consultation is complete for the project.

- a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is 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 tribal cultural resources have been identified on or near the Loch Lomond Scenario physical improvements site. Therefore, implementation of the conjunctive use scenarios would not cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074. However, archaeological resources that may later be identified as tribal cultural resources may be encountered during ground disturbance. In the event of an unanticipated discovery, impacts to unknown tribal cultural resources would be potentially significant and mitigation measures would be required.

## **Mitigation Measures**

The following mitigation measure would reduce impacts to a less than significant level.

### *TCR-1 Unanticipated Tribal Cultural Resources*

In the unlikely event that tribal cultural resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall be halted and an archaeologist meeting the Secretary of the Interior’s Professional Qualification Standards for archaeology (National Park

Service 1983) shall be contacted immediately to evaluate the find. If the find is prehistoric, then a local Native American representative shall also be contacted to participate in the evaluation of the find. Impacts to the find shall be avoided to the extent feasible; methods of avoidance may include, but shall not be limited to, capping or fencing, or project redesign. If necessary, the archaeologist may be required to prepare a treatment plan for archaeological testing in consultation with the local Native American representative. If the discovery proves to be eligible for the CRHR and cannot be avoided by the project, additional work, such as data recovery excavation, may be warranted to mitigate any significant impacts to historical resources.

Implementation of Mitigation Measure TCR-1 would reduce potential impacts to unanticipated archaeological resources to less than significant.

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- b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is 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?*

As discussed under item a, no tribal cultural resources have been identified on or near the Loch Lomond Scenario physical improvements site. Therefore, implementation of the conjunctive use scenarios would not cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074. However, archaeological resources that may later be identified as tribal cultural resources may be encountered during ground disturbance. In the event of an unanticipated discovery, impacts to unknown tribal cultural resources would be potentially significant and mitigation measures would be required. Implementation of Mitigation Measure TCR-1 would reduce potential impacts to unanticipated archaeological resources to less than significant.

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# 19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Would the project:

a. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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?*

## Water

The three conjunctive use scenarios evaluated throughout this IS-MND involve existing and proposed water supply infrastructure, the environmental effects of which are analyzed in this document. The scenarios would not require or result in the relocation or construction of new or

expanded water facilities beyond those identified in the *Project Description*. Consequently, no additional impact related to water facilities would occur.

### **Wastewater Treatment**

The proposed conjunctive use scenarios would not generate sanitary wastewater or otherwise contribute to an increase in wastewater treatment. Therefore, the proposed plan would not require relocation or construction of new wastewater facilities, and no impact would occur.

### **Stormwater Drainage**

As discussed in the *Project Description*, the SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not involve construction activities, as no new infrastructure is proposed under these scenarios. Water diversion changes proposed under these scenarios would not introduce new impervious surface areas or otherwise increase stormwater runoff. As such, no impact related to stormwater drainage would occur.

The Loch Lomond Scenario would require the installation of new infrastructure, which would be installed in previously disturbed, paved areas, and suspended under San Lorenzo Way bridge. Upon completion of construction, paved surfaces would be restored to existing conditions. As discussed in Section 10, *Hydrology and Water Quality*, upon completion of construction, drainage patterns within the Loch Lomond Scenario new infrastructure areas would be restored to existing conditions, and stormwater runoff would not substantially increase. As such, implementation of the Loch Lomond Scenario would not require new or expanded stormwater drainage infrastructure. No impact related to stormwater drainage would occur.

### **Electric Power**

As described in the *Project Description*, the proposed conjunctive use scenarios would require approximately 66 MWh of electricity annually to operate due to increased pumping needs. Electricity needs would be met via existing electric power infrastructure at District facilities such as the Kirby Water Treatment Plant. No new or expanded electric power infrastructure would be required. No impact would occur.

### **Natural Gas**

The proposed conjunctive use scenarios would not involve any components requiring natural gas service and would not involve the relocation of existing natural gas facilities. Therefore, no impact related to natural gas facilities would occur.

### **Telecommunications**

The proposed conjunctive use scenarios would not require additional telecommunications infrastructure beyond those already existing at District facilities. As such, the scenarios would not require the construction or relocation of new telecommunication facilities. Therefore, no impact related to telecommunications facilities would occur.

### **NO IMPACT**

- 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?*

The conjunctive use plan does not propose new homes, businesses, or other land uses which would directly generate population growth. As such, the plan would not result directly induce growth which would introduce new water demand. As discussed in Section 14, *Population and Housing*, the purpose of the proposed conjunctive use scenarios is to improve water reliability in order to serve existing demand and improve performance reliability rather than to serve new growth. The conjunctive use scenarios would not expand potable water service beyond areas currently served by existing infrastructure. In addition, the Loch Lomond Scenario infrastructure improvements would not increase the maximum capacity of the existing Kirby Water Treatment Plant. As such, no adverse impact related to sufficiency of water supplies would occur.

**NO IMPACT**

- 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?*

As discussed under item (a), implementation of the proposed plan would not generate sanitary wastewater or otherwise contribute to an increase in wastewater treatment requirements. Thus, no impact would occur.

**NO IMPACT**

- 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?*

Construction activities associated with the Loch Lomond Scenario would generate solid waste in the form of construction debris and excavated soil. As described in the *Project Description*, approximately 300 cy of excavated soil would be exported from the construction area. Soil and construction debris would be disposed of in accordance with solid waste disposal regulations. Construction-generated solid waste would be transported to the Ben Lomond Santa Cruz County Transfer Station, then trucked to the Buena Vista Landfill. The Buena Vista Landfill has a maximum daily throughput of 838 tons per day, and a remaining capacity of 2.2 million cy as of 2018 (California Department of Resources Recycling and Recovery 2021).

Waste generation would be temporary, occurring only during project construction, and would be well below the 300 tons per day permitted capacity of the Ben Lomond Santa Cruz County Transfer Station and the remaining capacity of 2.2 million cy at Buena Vista Landfill. Therefore, the project would not result in significant impacts to a local landfill.

Once constructed, operation and maintenance activities associated with all three scenarios would not generate solid waste because they would consist of water conveyance and storage infrastructure. As such, operation of the proposed project would not exceed permitted capacity at local landfills. Impacts would be less than significant.

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- e. *Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

As discussed under item d, construction activities associated with the Loch Lomond Scenario would generate solid waste in the form of construction debris and excavated soil. Soil and construction debris would be disposed of in accordance with solid waste disposal regulations. Once constructed, operation and maintenance activities associated with all three scenarios would not generate solid waste because they would consist of water conveyance and storage infrastructure. Impacts would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

## 20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

As noted in the *Project Description*, the CZU Lightning Complex fires burned through San Mateo and Santa Cruz counties beginning in August 2020, including portions of the SLVWD service area and conjunctive use plan area. In total, the fire burned approximately 86,500 acres, destroyed 7,567 buildings, and damaged SLVWD water supply infrastructure, resulting in significant operational capacity losses. The proposed conjunctive use scenarios would utilize existing District infrastructure, including surface water intakes at Foreman Creek, Peavine, Clear Creek, and Sweetwater Creek, all of which were damaged or destroyed in the CZU Lightning Complex Fire. As further described in the *Analysis Baseline* discussion in Section 9, *Surrounding Land Uses and Setting*, the baseline for this Initial Study reflects the condition of SLVWD water supply infrastructure and surrounding existing environmental conditions prior to the CZU Lightning Complex fires.

The SLRBT Low-Flow Requirements Modification Scenario and the North System Diversions Scenario would not include new infrastructure and would not impair an adopted emergency response or evacuation plan or expose people or structures to wildfire. The Loch Lomond Scenario is the only scenario in which construction is proposed. Neither the San Lorenzo Way Bridge or Kirby Water Treatment Plant are located in a Very High Fire Hazard Severity Zone. As discussed in Section 9, *Hazards and Hazardous Materials*, these sites are located in the Moderate Fire Hazard Severity Zone in the State Responsibility Area. The closest Very High Fire Hazard Severity Zone is located approximately 4.15 and 4.25 miles west of the San Lorenzo Way Bridge and Kirby Water Treatment Plant, respectively (CAL FIRE 2020).

As discussed above, the proposed physical improvements area is not in or near state responsibility areas or lands classified as very high fire hazard severity zones. Furthermore, the purpose of the proposed conjunctive use scenarios is to improve water supply reliability within the San Lorenzo River watershed, thereby bolstering water supplies for firefighting efforts. No adverse impact related to wildfire risk would occur.

**NO IMPACT**

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

As discussed above, the proposed physical improvements area is not in or near state responsibility areas or lands classified as very high fire hazard severity zones. Under the proposed Conjunctive Use Plan, none of the scenarios would build habitable structures. Furthermore, the purpose of the proposed conjunctive use scenarios is to improve water supply reliability within the San Lorenzo River watershed, thereby bolstering water supplies for firefighting efforts. No adverse impact related to wildfire risk would occur.

**NO IMPACT**

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

As discussed above, the proposed physical improvements area is not in or near state responsibility areas or lands classified as very high fire hazard severity zones. Under the proposed Conjunctive Use Plan, none of the scenarios would build habitable structures requiring the installation of associated fire protection infrastructure. Furthermore, the purpose of the proposed conjunctive use scenarios is to improve water supply reliability within the San Lorenzo River watershed, thereby bolstering water supplies for firefighting efforts. No adverse impact related to wildfire risk would occur.

**NO IMPACT**

- d. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

As discussed above, the proposed physical improvements area is not in or near state responsibility areas or lands classified as very high fire hazard severity zones. Under the proposed Conjunctive Use Plan, none of the scenarios would build habitable structures. Furthermore, the purpose of the proposed conjunctive use scenarios is to improve water supply reliability within the San Lorenzo River watershed, thereby bolstering water supplies for firefighting efforts. No adverse impact related to wildfire risk would occur.

**NO IMPACT**

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# 21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Does the project:

- |  |                          |                                     |                                     |                          |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| <p>a. 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?</p> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p>b. 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)?</p>   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p>c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p>  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

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?*

As noted under Section 4, *Biological Resources*, several special status amphibian, reptile, and mammal species have potential to occur within the plan area. The plan area also contains suitable nesting habitat for numerous migratory bird species, which could nest in the trees and shrubs during the nesting season. Potential impacts to white-tailed kite, osprey, and nesting birds would only occur if active nests occur in the vicinity of construction under the Loch Lomond Scenario. Disturbance to nesting birds from construction activities and noise could result in nest failure. Mitigation Measure BIO-1 would reduce these impacts to a less than significant level. Accordingly,

the plan would not 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, or substantially reduce or restrict the range of a rare or endangered plant or animal. Furthermore, as discussed in Section 4, *Biological Resources*, and in the Fisheries Resource Considerations report (Appendix B), implementation of the conjunctive use scenarios would improve fish habitat for fish species.

The Loch Lomond Scenario physical improvements area does not contain any known archaeological or tribal cultural resources. The Loch Lomond Scenario pipeline construction would occur underground and suspended from the San Lorenzo Way Bridge. Although trenching may result in the partial removal of asphalt from the road surface, this material is not original or considered character defining, and it would be replaced in kind. The roadway and its immediate surroundings have been subject to continual improvements since its construction, and the actions proposed under the current scenario are consistent with this ongoing maintenance. As a result, the proposed plan would not eliminate an important example of major periods of California history or prehistory.

#### **LESS THAN SIGNIFICANT IMPACT**

- 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)?*

Cumulative impacts are defined as two or more individual project effects which, when considered together or in concert with other projects, combine to result in a significant impact within an identified geographic area. In order for a project to contribute to cumulative impacts, it must result in some level of impact on a project-specific level. As described in the impact analyses provided in Sections 1 through 20 of this IS-MND, a number of the environmental topic areas would experience “No Impact” as a result of the proposed conjunctive use plan; in other words, none of the significance criteria identified for these environmental topic areas would result in impacts. These environmental topics include the following: Agriculture and Forestry Resources; Land Use and Planning; Mineral Resources; Population and Housing; and Recreation. These topic areas are not addressed further for cumulative impacts, because they would have no impact and therefore would not contribute to the cumulative scenario for cumulative impacts.

Cumulatively considerable impacts could occur if the construction of other projects occurs at the same time as the proposed project and in the same vicinity, such that the effects of similar impacts of multiple projects combine to expose adjacent sensitive receptors to greater levels of impact than would occur under the proposed project. For example, if the construction of other projects in the area occurs at the same time as construction of the proposed project, potential impacts associated with noise and traffic to residents in the project area may be more substantially affected.

Construction activities associated with the Loch Lomond Scenario physical improvements could potentially occur at the same time as the following District projects:

- Replacement of infrastructure damaged in the CZU Lightning Complex fires;<sup>12</sup>
- Fall Creek Fish Ladder;

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<sup>12</sup> As discussed in the *Project Description*, the baseline for this IS-MND reflects the condition of SLVWD water supply infrastructure prior to the CZU Lightning Complex fires. However, physical construction impacts associated with replacement of damaged infrastructure could cause cumulative impacts when considered with the construction impacts of the proposed conjunctive use scenarios. As such, these infrastructure replacements are included in the list of cumulative projects herein.

- Five-Mile Pipeline Project;
- 2020 Pipeline Project;
- Lyon Slide Repair Project;
- Lompico Tanks Replacement Project;
- Felton Heights Tank Replacement Project;
- Redwood Park Tank Replacement Project; and the
- Glen Arbor Bridge Pipeline Replacement Project.

In May 2021, the District’s Board declined to take the next step in a consolidation process with the Scotts Valley Water District, bringing the possibility of a merger between the two water suppliers to a halt. At the time of preparation of this IS-MND, a merger between the two agencies was not under pursuit.

The following analysis of cumulative impacts addresses those effects for which some level of potential impact was identified, which includes topics for which a “Less than Significant Impact” was identified, as well as those for which the threshold question assumed some level of impact (i.e., those for which consideration of a potential “significant” effect was considered, per *CEQA Guidelines* Section 15382; in this case, threshold questions which assumed impacts would be “Less than Significant with Mitigation Incorporated”). Potential regional cumulative effects were considered for the environmental topics which would result in less than significant impacts from implementation of the project (without or with project mitigation).

- **Aesthetics.** Temporary aesthetic impacts associated with the presence and use of equipment and machinery at and around the Loch Lomond Scenario construction activities. However, these effects would be temporary in duration. In addition, water storage facilities are part of the water system infrastructure and existing aesthetic landscape in the San Lorenzo Valley. Therefore, no contribution to cumulative impacts, significant or otherwise, would occur.
- **Air Quality.** Air pollutant emissions disperse from their original source and can affect the entire air basin. For air quality, the baseline analysis addresses the cumulative condition, or the project’s contribution to the larger picture which is assessed in analyses of consistency with regional air quality strategies and pollutant dispersal. Air pollutant emissions associated with the proposed Conjunctive Use Plan correlate with the construction equipment and machinery used during construction of the Loch Lomond Scenario. The region is in non-attainment for criteria pollutant standards for ozone, which means that cumulative air quality impacts are inherently significant. However, MBARD’s significance thresholds are intended to determine whether a project would individually or cumulatively jeopardize attainment of the federal standards. The Loch Lomond Scenario’s air criteria pollutant emissions would not exceed MBARD’s significance thresholds. Therefore, air quality impacts of the proposed conjunctive use scenarios would not individually jeopardize attainment of the federal standards. Therefore, the Conjunctive Use Plan’s contribution to cumulative impacts would not be considerable.
- **Biological Resources.** Most cumulative impacts to biological resources occur when a disproportionate number of development projects occur at once and regionally impact a local population of special status species, riparian habitat, sensitive natural communities, wetlands, or other locally protected biological resources. In this case, the cumulative development projects identified above are spread out across the District’s service area and would primarily occur within previously disturbed areas (or consist of replacements of previously existing infrastructure), where suitable habitat for special status species, riparian habitat, sensitive

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natural communities, wetlands, and other biological resources are likely already limited, and movement patterns for wildlife in this region have already been constrained by the placement of existing development and infrastructure. As described in Section 4, *Biological Resources*, the Loch Lomond Scenario could result in impacts to biological resources associated with construction activities on the physical improvement sites. Implementation of Mitigation Measure BIO-1, as discussed in the analysis of biological resources provided in Section 4, would reduce biological resources impacts related to nesting birds to less-than-significant levels. In addition, the proposed conjunctive use scenarios would have a beneficial impact related to fish habitat within the San Lorenzo River. The Loch Lomond Scenario, and any other projects in the region, would also be required to comply with federal, State, regional, and local regulations and laws put in place to minimize impacts to biological resources. Therefore, cumulative impacts would be less than significant.

- **Cultural Resources.** Ground-disturbing activities during construction of the Loch Lomond Scenario physical improvements could potentially result in the accidental discovery of unknown archaeological resources. However, the District's standard construction contractor specifications require the implementation of best management practices to be implemented in the event of unanticipated discovery of cultural resources. In addition, the conjunctive use scenarios would not result in a substantial adverse change to a built environment resource listed or eligible for listing in the NRHP or the CRHR. Therefore, no contribution to cumulative impacts, significant or otherwise, would occur.
- **Geology and Soils.** Impacts associated with geology and soils, including paleontological resources, are inherently restricted to the location of the construction activities. As discussed in Section 7, *Geology and Soils*, the Loch Lomond Scenario would be required to comply with the Construction General Permit and implement a SWPPP, which would include BMPs to minimize erosion, siltation, and polluted runoff. Due to the site-specific nature of impacts and the appropriate regulatory compliance, the project would not contribute to cumulative impacts associated with other future developments.
- **GHG Emissions.** GHG emissions disperse from their original source and can affect the entire Earth. For GHG emissions, the baseline analysis addresses the cumulative condition, or the project's contribution to the larger picture which is assessed in analyses of consistency with climate change goals and policies. GHG emissions associated with the proposed Conjunctive Use Plan correlate with the construction equipment and machinery used during construction of the Loch Lomond Scenario. The significance threshold based on BAAQMD guidance is intended to determine whether a scenario would individually or cumulatively contribute to significant climate change impacts. The proposed conjunctive use scenario's GHG emissions would not exceed the significance thresholds. Therefore, the Conjunctive Use Plan's contribution to cumulative GHG impacts would not be considerable.
- **Hazards and Hazardous Materials.** Regarding hazards and hazardous materials, no regional concern is identified (i.e., no significant cumulative impact). Regulatory compliance described in Section 9, *Hazards and Hazardous Materials*, would reduce potential impacts associated with potential hazards to a less than significant level. The Conjunctive Use Plan would also comply with applicable federal, State, and local laws and regulations regarding hazardous materials. Therefore, no contribution to cumulative impacts, significant or otherwise, would occur.
- **Hydrology and Water Quality.** The cumulative development projects identified above are spread out across the District's service area and would primarily occur within previously disturbed areas. Cumulative development may marginally increase impermeable surface areas in the watershed. Regulatory compliance described in Section 10, *Hydrology and Water Quality*,

would reduce potential impacts associated with water quality to a less-than-significant level. Construction under the proposed Loch Lomond Scenario would be subject to regional requirements pertaining to reduction of impacts to hydrology and water quality. Regulatory compliance would reduce impacts associated with cumulative development. In addition, the proposed conjunctive use scenarios would have a beneficial impact on base surface water flows in the San Lorenzo River and its tributaries, and would ameliorate any existing cumulatively considerable impacts. Therefore, no contribution to cumulative impacts, significant or otherwise, would occur as a result of the proposed conjunctive use scenarios.

- **Noise.** The Loch Lomond Scenario physical improvement areas are located within a rural residential area with low ambient noise levels. The analysis in this IS-MND concluded the scenario would not exceed noise thresholds established by the County of Santa Cruz for quiet rural environments. Construction noise would be temporary in nature and operation under the proposed conjunctive use scenarios would not result in a substantial increase in ambient noise. No contribution to a cumulative impact, significant or otherwise, would occur.
- **Transportation.** The Loch Lomond Scenario would result in a temporary traffic impacts during construction. No substantial long-term transportation impacts would occur as a result of the Conjunctive Use Plan. Given the temporary nature of construction-related traffic impacts and the fact that none of the scenarios would generate a substantial amount of operational traffic, the contribution to a cumulative transportation impact, significant or otherwise, would not be cumulatively considerable.
- **Tribal Cultural Resources.** Implementation of Mitigation Measure TCR-1 would reduce the proposed project's potential impacts to tribal cultural resources to a less-than-significant level. Tribal cultural resources are inherently site-specific. The proposed scenarios, in combination with other projects in the area, would not result in significant cumulative impacts to tribal cultural resources. Therefore, no contribution to cumulative impacts, significant or otherwise, would occur.
- **Utilities and Service Systems.** The proposed Conjunctive Use Plan would not induce population growth and therefore would not, directly or indirectly, contribute to cumulative impacts to utilities and service systems.
- **Wildfire.** As described in Section 20, *Wildfire*, the proposed conjunctive use scenarios are not located in an area designated as a High Fire Hazard Severity Zone. Therefore, there would not be a significant cumulative impact. Furthermore, the project would not exacerbate wildfire risks. As discussed in Section 20, the purpose of the proposed conjunctive use scenarios is to improve water supply reliability within the San Lorenzo River watershed, thereby bolstering water supplies for firefighting efforts. No contribution to cumulative impacts, significant or otherwise, would occur.

For these reasons, the conjunctive use plan would not result in a considerable contribution to any cumulative effects significant or otherwise. This impact would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

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

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in the preceding sections, the proposed Conjunctive Use Plan would not result, either directly or indirectly, in adverse hazards related to air quality or noise. Compliance with applicable rules and regulations and implementation of Mitigation Measure HAZ-1 would reduce potential impacts on human beings to a less than significant level.

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