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***GAVIN NEWSOM, Governor***
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August 30, 2021

Ms. Carly Blanchard
Environmental Planner
San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006
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Subject: Conjunctive Use Plan for the San Lorenzo River Watershed, Initial Study/Mitigated Negative Declaration, SCH No. 2021070572, City of Felton, Santa Cruz County

Dear Ms. Blanchard:

The California Department of Fish and Wildlife (CDFW) has reviewed the Conjunctive Use Plan for the San Lorenzo River Watershed (Project) Initial Study/Mitigated Negative Declaration (IS/MND) prepared by San Lorenzo Valley Water District (SLVWD). CDFW is submitting comments on the IS-MND regarding potentially significant impacts to biological resources associated with the Project.

## CDFW ROLE

CDFW is a Trustee Agency with responsibility under the California Environmental Quality Act (CEQA; Pub. Resources Code, § 21000 et seq.) pursuant to CEQA Guidelines section 15386 for commenting on projects that could impact fish, plant, and wildlife resources (e.g., biological resources). CDFW is also considered a Responsible Agency if a project would require discretionary approval, such as permits issued under the California Endangered Species Act (CESA), the Native Plant Protection Act, the Lake and Streambed Alteration (LSA) Program, and other provisions of the Fish and Game Code that afford protection to the state's fish and wildlife trust resources.

## PROJECT DESCRIPTION

This Project is centered in SLVWD's service area in Santa Cruz County, California. SLVWD provides drinking water to unincorporated communities in Santa Cruz County including: Brookdale; Ben Lomond; Boulder Creek; Lompico; Felton; and areas surrounding Scotts Valley. SLVWD supplies water via surface water diversions from tributaries to the San Lorenzo River, and from wells that draw water from the Santa Margarita Groundwater Basin (SMGB).

Currently, SLVWD has three service areas: the North, Felton and Southern systems, which are independent of one another and draw water from distinct sources. The Northern System includes Brookdale, Ben Lomond, Boulder Creek, and Lompico. Water is supplied via surface diversions on Peavine, Foreman, Sweetwater, and Clear Creeks, and from groundwater drawn from the Quail Hollow and Olympia wellfields. The Felton Area is supplied solely from surface water diversions on Fall Creek, Bennett Spring, and Bull Creek. The Southern System relies on groundwater from the Pasatiempo wellfield.

The Project initially stemmed from SLVWD efforts to study and identify projects that would boost water supply reliability. For this effort, SLVWD contracted Exponent Environmental & Earth Sciences (Exponent). In 2019, Exponent released *Water Availability Assessment for San Lorenzo River Watershed Conjunctive Use Plan*, which is Appendix A in the IS/MND. This document identified 22 potential projects that could increase water supply reliability by reducing reliance on distinct water sources for the North, Felton and South System, and that in some cases conjunctively use water diverted from surface sources to recharge groundwater aquifers in the SMGB via direct injection, or indirectly affect groundwater by preferentially using water supplied from surface sources to meet customer demands as opposed to groundwater. The SMGB is overdrafted and the State's 2014 Sustainable Groundwater Management Act (SGMA) identifies it as a medium priority basin. This listing necessitated the formation of the Santa Margarita Groundwater Agency (SMGA) of which SLVWD and other local water suppliers are members. The SMGA is required to prepare a Groundwater Sustainability Plan for the SMGB by 2022.

The IS/MND advances four potential projects from Exponent's 2019 study potentially toward implementation to improve SLVWD water supply reliability. They are: modification of existing water right and associated bypass flow requirement for SLVWD's diversions on Fall Creek and Bennett Spring; importing excess water from stream diversions in the North System to supplement supplies in the Southern System; use of earmarked supply in City of Santa Cruz's Loch Lomond Reservoir to supplement supply in Southern System; and a conjunctive use scenario where excess water supplied from stream diversions in the North and Felton Systems is injected in the Olympia groundwater wellfield as an aquifer storage and recovery (ASR) project. The IS/MND states the first three projects could be implemented after adoption of this IS/MND, while the ASR project would require additional CEQA documentation.

## REGULATORY REQUIREMENTS

### California Endangered Species Act

Please be advised that a CESA Permit must be obtained if the Project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA

documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (CEQA section 21001(c), 21083, and CEQA Guidelines section 15380, 15064, 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code, section 2080.

**Lake and Streambed Alteration Program**

The Project has the potential to impact resources including mainstems, tributaries and floodplains associated with the San Lorenzo River Watershed including: Peavine Creek; Foreman Creek; Boulder Creek; Clear Creek; Sweetwater Creek, Fall Creek; Bennett Spring; Bull Creek; Newell Creek; Bean Creek; Zayante Creek; and the mainstem of the San Lorenzo River. Notification is required, pursuant to CDFW's LSA Program (Fish and Game Code, section 1600 et. seq.) for any Project-related activities that will substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake or stream. CDFW considers work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. CDFW, as a Responsible Agency under CEQA, will consider the CEQA document for the project. CDFW may not execute the final LSA Agreement until it has complied with CEQA (Public Resources Code section 21000 et seq.) as the responsible agency.

**ENVIRONMENTAL SETTING AND LOCATION**

The Project is located in the water system and service area of the SLVWD, and the greater San Lorenzo River watershed inclusive of the middle, and lower mainstems, Loch Lomond, Newell Creek, Bean Creek, Zayante Creek, and the SMGB.

The San Lorenzo River watershed covers 138 square miles, with 25 miles of mainstem habitat. The watershed is bounded by Castle Rock Peak and Ben Lomond Mountains and contains significant tracts of Coastal Redwood (*Sequoia sempervirens*) forest and Sandhills, which are characterized by Zayante sand soils and a collection of endemic and uniquely adapted plants and wildlife. Elevations in the watershed range from 3,214 feet to sea level. The surrounding climate is Mediterranean, and annual rain can vary throughout the watershed from 15 to over 100 inches of rain. SLVWD diverts surface waters from sources that encompass 7.1 square miles of the watershed.

Threatened, endangered, and other special-status species that are known to occur, or have the potential to occur in the Project area, include, but are not limited to:

| **Common Name** | **Scientific Name** | **Status** |
|---|---|---|
| California giant salamander | *Dicamptodon ensatus* | SSC |
| California red-legged frog | *Rana draytonii* | FT, SSC |
| Foothill yellow-legged frog – Southwest/South Coast Clade | *Rana boylii* | SE, SSC |
| Santa Cruz black salamander | *Aneides niger* | SSC |
| Santa Cruz long-toed salamander | *Ambystoma macrodactylum croceum* | FE, SE, SFP |
| Black swift | *Cypseloides niger* | SSC |
| Burrowing owl | *Athene cunicularia* | SSC |
| Marbled murrelet | *Brachyramphus marmoratus* | FT, SE |
| Tricolored blackbird | *Agelaius tricolor* | ST, SSC |
| Western snowy plover | *Charadrius nivosus nivosus* | FT, SSC |
| White tailed kite | *Elanus leucurus* | SFP |
| Coho salmon – Central California coast ESU | *Oncorhynchus kisutch* | FE, SE |
| Steelhead – Central California coast DPS | *Oncorhynchus mykiss irideus* | FT |
| Tidewater goby | *Eucyclogobius newberryi* | FE |
| Ohlone tiger beetle | *Cicindela Ohlone* | FE |
| Smith’s blue butterfly | *Euphilotes enoptes smith* | FE |
| Zayante band-winged grasshopper | *Trimerotropis infantilis* | FE |
| American badger | *Taxidea taxus* | SSC |
| Pallid bat | *Antrozous pallidus* | SSC |
| San Francisco dusky-footed woodrat | *Neotoma fuscipes annectens* | SSC |
| Townsend’s big-eared bat | *Corynorhinus townsendii* | SSC |

| | | |
|---|---|---|
| Western pond turtle | *Emys marmorata* | SSC |
| Notes:<br>FE = Federally Endangered; FT = Federally Threatened; SE = State Endangered; ST = State Threatened; SFP = State Fully Protected; SSC = State Species of Special Concern; ESU = Evolutionarily Significant Unit; DPS = Distinct Population Segment | | |

CDFW recommends that prior to project implementation surveys be conducted for special-status species noted in this comment letter with potential to occur, following recommended survey protocols if available. Survey and monitoring protocols and guidelines are available at: https://www.wildlife.ca.gov/Conservation/Survey-Protocols.

## COMMENTS AND RECOMMENDATIONS

CDFW offers the following comments and recommendations to assist SLVWD in adequately identifying and/or mitigating the project's significant, or potentially significant, direct and indirect impacts on biological resources.

### Comment 1: San Lorenzo River at Big Trees Low-Flow Requirements Modification Scenario

**Issue:** The IS/MND proposes modifying the existing Fall Creek Diversion water right and specifically eliminating an existing stipulation in the bypass flow requirements. This is described in the IS/MND on page 5. The existing water right requires SLVWD to bypass 1.5 cubic foot per second (cfs) of streamflow November through March and 1 cfs April through October in wet years, and 0.75 cfs November through March and 0.5 cfs April through October in dry years below the diversion. It also requires SLVWD cease all diversions at Fall Creek if the San Lorenzo River U.S. Geological Survey (USGS) gauge at Big Trees (SLRBT) goes below 10 cfs in September, 25 cfs in October, or 20 cfs in November. This latter obligation to cease all diversions in the Fall depending on the flows at the SLRBT gauge is the portion of the bypass flows SLVWD wishes to alter. This would reduce restrictions and allow SLVWD to divert more water to meet Felton System customer demands. However, the existing SLRBT streamflow bypass obligations are intended to be protective of juvenile Central California Coast steelhead trout (*Oncorhynchus mykiss*) rearing in the mainstem San Lorenzo River during critical low flow periods.

In *Fisheries Resource Considerations for the San Lorenzo River Watershed Conjunctive Use Plan* (Appendix B), the history of the origin of this bypass flow stipulation is discussed. There is a discussion of variation in the required bypass quantities at

SLRBT, and lack of justification for these monthly adjustments relative to anadromous salmonid life histories. Regardless of justification for month-to-month variation, CDFW acknowledges the City of Santa Cruz is seeking approval for a Habitat Conservation Plan (HCP) to protect steelhead trout and Central California Coast Coho Salmon (*Oncorhynchus kisutch*) that will obligate the City to bypass a minimum of 10 cfs in September, 25 cfs in October and 20 cfs all other months of the year at their Felton Diversion, which is just upstream of SLRBT (City of Santa Cruz 2021).Selection of 20 cfs for the Felton diversion bypass was not directly informed by physical habitat modeling but was selected due to analysis supporting that it would protect migration ability of smolt sized and smaller steelhead. Elsewhere, the City of Santa Cruz did use Instream Flow Incremental Methodology (Bovee 1998) to inform the selection of bypass flow criteria they are seeking to implement.

CDFW asserts that operating the Fall Creek diversion in accordance with existing bypass stipulations at SLRBT does afford protections to juvenile steelhead in the mainstem San Lorenzo River. Eliminating this existing bypass stipulation will allow reductions of instream flow below those established in the City of Santa Cruz HCP. Those flows are necessary to conserve the ecosystem upon which listed species (rearing juvenile steelhead in the San Lorenzo River) depend, ultimately contributing to their recovery. Increased diversions, (particularly in dry years at Fall Creek) has 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; substantially reduce the number or restrict the range of an endangered, rare or threatened species; and reduce the overall population number of steelhead juveniles this section of river could support. CDFW has worked with the City of Santa Cruz and NOAA Fisheries for many years to develop an integrated water resources management strategy that is protective of special status anadromous salmonid species while also providing for long-term water supply reliability. This strategy includes the development of a Habitat Conservation Plan negotiated with CDFW and NOAA Fisheries designed to enhance instream flow for coho salmon and steelhead in the San Lorenzo River watershed.

This Project not only seems to be in direct conflict with the goals of the City of Santa Cruz HCP but there is no detailed evaluation included in the IS/MND regarding the potential impacts these increased diversions will have on the existing instream flow or how they might impact habitat conditions for salmonids.

**Recommendations:** CDFW recommends SLVWD does not alter the existing SLRBT bypass flow requirement in order to protect San Lorenzo River flows during dry periods and droughts for rearing juvenile steelhead trout. The study by Exponent in Appendix A identifies other potential projects to provide alternative supplies to Felton System to provide relief when SLVWD is unable to divert at Fall Creek due to low flows and needs to comply with bypass flows. Some of these projects will be more beneficial to salmon

and steelhead than elimination of a significant portion of the Fall Creek Diversion bypass flow stipulations. If SLVWD were to pursue the alteration the existing SLRBT bypass flow requirement, an in-depth analysis of the potential downstream impacts associated with this change would need to be presented and discussions and coordination with CDFW and NOAA Fisheries should occur. Altering existing bypass flows per the project description presents a risk for 'take' of CESA listed species which would necessitate a CESA Permit.

**Comment 2: Other Public Agencies Whose Approval is Required**

**Issue:** Page 16, Table 1 of the IS/MND, indicates approvals and permits for the Project will be needed from State Water Resources Control Board (SWRCB), Central Coast Regional Water Quality Control Board (CCRWQCB), County of Santa Cruz, and California Department of Transportation. This table should also cite that SLVWD surface water diversions are subject to Fish and Game Code section 1602. CDFE recommends SLVWD obtain LSA Agreements for all its surface water diversions from CDFW prior to diverting streamflow. CDFW has concerns with the current SLVWD diversion practices, particularly summer and fall diversions during low flows are already negatively impacting Coho salmon and steelhead trout. Areas of greatest concern are Boulder Creek, mainstem San Lorenzo River, Fall Creek and Clear Creek. This Project may increase diversions at all stream diversions SLVWD operates.

**Evidence of Significant Impacts:**

*Reduction in wetted habitat*: Diversion of water, particularly during summer low flow and/or drought conditions, reduces aquatic habitat quantity and quality or suitability (e.g., pool volumes, wetted channel, stream depths, water quality) for fish and other aquatic species (Gasith and Resh 1999, Marchetti and Moyle 2001; Lake 2003; taken from Deitch, et al. 2009). Reduction in aquatic conditions can have direct, indirect, and/or lethal effects on fish and aquatic life. Fish that are not able to respond to shifting habitat conditions as summer base flows recede can become trapped in isolated pools where: a) organisms become concentrated, b) water quality can become lethal, c) risk of predation increases, and d) competition increases for limited food resources. When fish are stressed by any one process, they are less able to deal with other stressors (Wedemayer et al. 1980).

*Reduction in water quality:* Reduced flow volume has a strong positive correlation with increased water temperature (Arismendi et al, 2012). Increased water temperatures reduce growth rates in fish and increase their susceptibility to disease, while warmer water also holds less dissolved oxygen, which can reduce survival in juvenile salmonids (Moyle 2002). Both water temperature and dissolved oxygen are critically important for salmonid survival and habitat quality (Moore and Townsend 1998). Though isolated pools can provide critical refuge habitat, extended intermittency can drive high mortality

as dissolved oxygen levels decline to lethal levels (Woelfle-Erskine et al. 2017, Wigington et al. 2006).

*Barrier to Movement:* Reduced instream flow interrupts invertebrate drift, disrupts channel dynamics, increases deposition of fine sediments, inhibits recruitment of spawning gravels, and promotes encroachment of riparian and non–endemic vegetation into spawning and rearing areas (CDFW 2002). Juvenile salmonids react to reduction in stream connectivity from changing conditions by re-distributing themselves within the stream network in order to find more suitable rearing habitat (Hwan and Carlson 2015). Shirvell (1994) found that juvenile coho salmon moved upstream in response to decreasing stream flows to find suitable micro-habitat. Once established, salmonids exhibit high site fidelity (Sogard et al. 2009). This movement between habitats can be restricted when flow over riffles becomes too shallow (Hwan and Carlson 2015, Bradford and Heinonen 2008).

**Recommendations:** CDFW recommends SLVWD apply for and obtain LSA Agreements for operations of all SLVWD's surface water diversions. CDFW recommends SLVWD initiate discussions with CDFW and NOAA Fisheries regarding diversion compliance, and methodology to develop protective bypass flows considerate of the City of Santa Cruz's HCP, for anadromous salmonids for all points of diversion within a river, lake or stream.

**Comment 3: Biological Resources pgs. 35-40**

**Issue:** CDFW is concerned operational practices associated with these Projects will result in increased diversion of streamflow at all SLVWD diversions. Reduced stream flows particularly during critical low flow periods and dry years, are harmful to aquatic and riparian ecosystems, Coho salmon, and steelhead trout populations other aquatic life such as amphibians and benthic macroinvertebrates.

The IS/MND concludes significant effects with mitigation included for impacts to habitat of special-status fish, and less-than-significant impacts to interference with movement and migration of native fish. These assertions are almost entirely supported by analysis contained in Appendix A (*Water Availability Assessment for San Lorenzo River Watershed Conjunctive Use Plan)* and Appendix B (*Fisheries Resource Considerations for the San Lorenzo River Watershed Conjunctive Use Plan).*

The *Water Availability Assessment for San Lorenzo River Watershed Conjunctive Use Plan* (Appendix A) contains the following statement with respect to the limitations of the study:

> "The results of this study are suitable for a planning-level evaluation of conjunctive use alternatives. The synthesized monthly records of water supply and use have limited precision and should not be used to evaluate compliance

> with specific regulatory, water-right, or habitat requirements. The alternatives are evaluated under optimal, hypothetical conditions without full regard for infrastructure and operational limitations, and as such likely overestimate potential yields. The actual yield of existing and future infrastructure will depend on numerous factors beyond the scope of this analysis.
>
> The approach used to evaluate and compare conjunctive use alternatives does not consider the effects of stream diversions or groundwater pumping other than by San Lorenzo Valley Water District (SLVWD). Beyond the simplified approach used for this study, evaluating the effects of groundwater pumping on streamflow requires use of a calibrated numerical groundwater flow model, which was outside the scope of this study. The conjunctive use alternatives are evaluated and compared on the basis of the 1970-2017 climatic period without considering potential climate change.
>
> The report provides additional details about the methods, results, and limitations of this study."

The *Fisheries Resource Considerations for the San Lorenzo River Watershed Conjunctive Use Plan* (Appendix B) contains the following statement with respect to the limitations of the analysis:

> "Similar to the approach used in the WAA [Water Availability Analysis], the results of this analysis of fisheries resource considerations for the *San Lorenzo River Watershed Conjunctive Use Plan* are suitable for a planning-level evaluation of conjunctive use alternatives. Due to the limited precision of the synthesized monthly records of water supply (Exponent 2019), the results should not be used to evaluate compliance with specific regulatory, water-right, or habitat requirements. Instead, this comparative analysis is intended to identify the relative fisheries benefits of individual conjunctive use scenarios and to narrow down the selection of potential projects to move forward in the planning process."

These statements acknowledging the limitations of the analysis are concerning. They raise serious doubts regarding the ability of these two studies to adequately support findings that the Project has less-than-significant impacts. This limited analysis does not demonstrate a good faith effort to determine whether there is substantial evidence that the Project would result in any significant environmental effect. The *Biological Technical Memorandum for the San Lorenzo Valley Water District Conjunctive Use Plan* (Rincon Consultants, Inc. 2020; Appendix E) states: "It is assumed that any 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 habitat in these tributaries or downstream reaches of the San Lorenzo River." (Page 4)

However, there is no additional explanation or analysis presented to support this assumption other than a reference to the *Fisheries Resource Considerations* document which has already been established to be unsuitable for evaluating compliance with specific regulatory, water-right, or habitat requirements. Based on current Project analysis, CDFW believes there may be potentially significant negative impacts to Coho salmon, steelhead trout and other aquatic life due to operation practices at SLVWD diversions in association with these Projects. DW Alley and Associates long-term sampling has established a negative correlation between May to September average streamflow and juvenile steelhead trout average densities in the San Lorenzo River (DW Alley and Associates 2020). DW Alley also qualitatively has observed declining habitat in San Lorenzo River with decreasing baseflow. It is logical to assume that diversion would negatively impact fish and results in take and direct impacts to fish, particularly in a system like Boulder Creek where up to 20% of mainstem baseflow may be diverted by upstream SLVWD diversion and these impacts are likely to extend to the San Lorenzo River mainstem as well.

**Recommendation:** See CDFW's recommendation for Comment 2, which directly applies here. Documentation providing a detailed description of the amount and timing of the additional diversions as well as a comprehensive assessment of the instream flow needs of protected resources downstream of all the diversions would be needed to support SLVWD's finding that this Project would have a less-than-significant impact.

**CONCLUSION**

While the Project does identify some potential benefits to improvement of stream base flow in areas by reducing some groundwater pumping (which may improve habitat for these species) overall, the alteration of instream flows included in the Project have the potential to significantly impact downstream resources negatively by decreasing flow during critical life cycle periods for salmonids. The IS/MND fails to adequately assess or address potential downstream impacts from the reduction in the amount of water in the system. CDFW recommends SLVWD conduct a comprehensive assessment of biological resources downstream of the diversions, collect the necessary data to determine whether flow reductions would significantly impact these downstream resources, and perform the detailed analysis needed to demonstrate if there is a less-than-significant impact. If impacts are potentially significant, additional mitigation measures including minimum flow releases should be identified.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (CEQA section 21001(c), 21083, and CEQA Guidelines section 15380, 15064, 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC).

## FILING FEES

CDFW considers this Project to have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish and Game Code, section 711.4; Pub. Resources Code, section 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

If you have any questions regarding this letter or for further coordination with CDFW, please contact Ms. Jessie Maxfield, Water Rights Coordinator, at (707) 210-2807 or Jessica.Maxfield@wildlife.ca.gov; or Mr. Wesley Stokes, Senior Environmental Scientist (Supervisory), at Wesley.Stokes@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Stacy Sherman
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Stacy Sherman
Acting Regional Manager
Bay Delta Region

ec: State Clearinghouse No. 2021070572
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