



April 4, 2024

VIA EMAIL fgc@fgc.ca.gov

Ms. Samantha Murray, President & Members
California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244

Dear President Murray and Members:

Comments on the Petition to List the Southern California Steelhead Pursuant to the California Endangered Species Act and the Department of Fish and Wildlife's Status Review Report

The Los Angeles County Sanitation Districts (Sanitation Districts) received the Notice of Final Consideration of the subject petition by the California Fish and Game Commission (Commission) for their April 17-18, 2024, meeting, and have reviewed the January 2024 California Department of Fish and Wildlife (CDFW) Status Review Report of Southern California Steelhead (2024 Status Report). The Sanitation Districts previously reviewed the June 7, 2021, Petition to List the Southern California Steelhead under the California Endangered Species Act (CESA) and the November 2021 Petition Evaluation prepared by CDFW and provided comments to the Commission on January 27, 2022 (see Attachment 1). By way of background, the Sanitation Districts are a confederation of 24 special districts serving approximately 5.4 million people in Los Angeles County (County). Our service area covers approximately 850 square miles and encompasses 78 cities and unincorporated territory within the County. The Sanitation Districts construct, operate, and maintain facilities to convey, treat, recycle, and dispose of wastewater, and generate recycled water, bioenergy, and biosolids as byproducts of the treatment process.

General Comments Related to Listing and Identification of the Upper Santa Clara and Lower San Gabriel Rivers

As indicated in our previous comment letter, the Sanitation Districts are not taking a position regarding the listing of Southern California Steelhead (SCS) under CESA. However, we hope that the information provided in that letter has allowed the Commission and CDFW to gain an understanding of our operations and the significant potential consequences of CESA listing to our operations. For the upper Santa Clara River above its confluence with Piru Creek, and the portion of the lower San Gabriel River below its confluence with San Jose Creek, we are unaware of any evidence that SCS currently use these waterbodies due to the presence of physical barriers, lack of streamflow, and/or lack of suitable habitat. Thus, the Sanitation Districts are concerned about the implications of designating these areas as currently supporting SCS, and the impact that this designation may have over time on our ability to carry out the essential public services that we provide. We are concerned about requirements and water quality objectives that may be imposed on the water reclamation plants (WRPs) that we operate by CDFW and/or the Los Angeles Regional Water Quality and State Water Resources Control Boards (collectively the "Waterboards") in order to protect purported SCS habitat. Specifically, we are concerned that, when considering requests for Streambed Alteration Agreements, CDFW may incorrectly assume the presence of SCS to impose stringent prohibitions or conditions on essential activities such as maintaining sewers (which may cross under/over

these rivers), maintaining or installing retaining walls, and maintaining discharge outfalls located in the affected water bodies. Further, the Waterboards may update the Los Angeles Region Water Quality Control Plan, as well as subsequently modify National Pollutant Discharge Elimination System (NPDES) permits, to require higher-quality discharges to receiving waters to protect SCS, even if they are not and cannot be present in these locations due to the barriers (i.e., dry gaps, dams, etc.) preventing access. Finally, the Sanitation Districts' wastewater facilities operate under California Water Code Section 1211 approved petitions, which are issued by the Waterboards and govern the discharges, and these allow us to provide recycled water for municipal uses.

One possible consequence of the potential changes to water quality regulatory requirements, or imposition of other new regulatory requirements, could be a need for new types of treatment at our WRP facilities. The cost, energy, and greenhouse gas emission impacts of constructing and operating additional treatment facilities to support SCS habitat would be substantial, and all for a purported SCS distribution that is not known to occur in reaches of the upper Santa Clara River, lower San Gabriel River, and their tributaries to which the Sanitation Districts' WRPs discharge recycled water. Furthermore, the potential listing of SCS could lead to unintended consequences such as less recycled water being available for reuse due to additional discharges to the rivers that could be required, even if this habitat is not accessible or appropriate for SCS. This would affect the water supply and resiliency of this region and potentially create water shortages.

Specific Comment on 2024 CDFW Status Report Figure 7

Moreover, the Sanitation Districts are concerned that Figure 7 of CDFW's 2024 Status Report (page 43) clearly mis-identifies reaches of the Santa Clara River extending far upstream of Piru Creek as current SCS distribution areas. The Sanitation Districts own and operate two WRPs that discharge approximately 18 million gallons per day of recycled water into the upper Santa Clara River, constituting most of the surface flow in portions of that waterbody where surface flow is present. Reaches of the Santa Clara River where discharges occur are separated by a naturally occurring "dry gap" from coastal reaches (see map in Attachment 2). Piru Creek was indicated as the upper limit of potential SCS habitat identified in the National Marine Fisheries Service January 2012 Southern California Steelhead Recovery Plan. Thus, it was the Sanitation Districts' understanding that the Santa Clara River upstream of Piru Creek is not suitable SCS habitat and consequently is not a focus of the potential CESA listing. Prior discussions with CDFW staff in March 2022 had supported this understanding. Furthermore, we are currently working on receiving water temperature studies in the upper Santa Clara River with CDFW and United States Fish and Wildlife Service (USFWS) staff, and SCS have never been identified by the USFWS or any other State or federal resource agencies as a species present in this area of the watershed. Despite these facts, and without any evidentiary basis, the 2024 Status Report shows a blue line signifying actual SCS presence in these reaches.

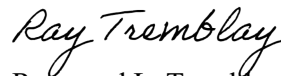
Research by ESA Consultants (see Attachment 3 for ESA technical memorandum), including several studies conducted over the past several decades in the area, has indicated that there is no record of current SCS occupation in the upper Santa Clara River watershed (east of the Piru Creek confluence) on which to support any determination of species "presence". Despite extensive fish sampling in the area over the last few decades, no SCS have been encountered. Habitat conditions currently do not suggest suitable habitat is present for this species in the area. Furthermore, the 2024 Status Report did not reference any scientific work or publication that would support such a determination. Sanitation Districts staff recently met with CDFW staff involved with development of the 2024 Status Report, and we appreciate the cooperation of CDFW staff in discussing this matter with us. However, during this discussion, CDFW staff did not provide any new evidence or sufficient scientific justification for demarcating the upper Santa Clara River watershed as current SCS habitat. The references discussed in the 2024 Status Report have been thoroughly reviewed by ESA Consultants and incorporated into their attached report. While the Sanitation Districts recognize this is only a status report, we are very concerned about the potential for future misuse of the SCS distribution indicated in the 2024 Status Report to require or suggest unnecessary restrictions and conditions on our facilities in the upper Santa Clara River to protect the species.

Based on the above, the Sanitation Districts respectfully request that the Commission take the following actions:

- 1) Santa Clara River – Direct CDFW staff to remove the “Current” SCS distribution designation for the Santa Clara River upstream of Piru Creek from Figure 7 of the 2024 Status Report.
- 2) San Gabriel River – Direct CDFW staff to work with the Sanitation Districts to develop a Section 2084 regulation and Section 2081(d) rule that is protective of the SCS species yet allows the Sanitation Districts to continue activities necessary to support their essential function of providing wastewater treatment and related services, including but not limited to discharge, monitoring and the provision of recycled water, to County residents and businesses. This reiterates the request from our previous correspondence, which is provided again as Attachment 1.

Once again, we thank you for the opportunity to provide these comments and look forward to working with CDFW and the Commission. For any questions, please contact the undersigned at (560) 908-4288, ext. 2701 or rtremblay@lacs.org.

Very truly yours,



Raymond L. Tremblay
Department Head
Facilities Planning

Attachment 1 – Sanitation Districts previous comment letter dated January 27, 2022

Attachment 2 – Map of the Santa Clara River Watershed relative to Sanitation Districts WRPs

Attachment 3 – ESA Technical Memorandum: Review of Current and Historical *Oncorhynchus mykiss* Occurrences in the Upper Santa Clara River Watershed (Los Angeles County)

cc: Melissa Miller-Henson, Executive Director, FGC
Charlton Bonham, Director, CDFW

ATTACHMENT 1



January 27, 2022

VIA EMAIL fgc@fgc.ca.gov

Mr. Peter S. Silva, President & Members
California Fish and Game Commission
P.O. Box 944209
Sacramento, CA 94244

Dear President Silva and Members:

Comments on the Petition to List the Southern California Steelhead Trout Pursuant to the California Endangered Species Act and the Department of Fish and Wildlife's Petition Evaluation

The Los Angeles County Sanitation Districts (Sanitation Districts) have reviewed the June 7, 2021, Petition to List the Southern California Steelhead (Steelhead) under the California Endangered Species Act (CESA) and the November 2021 Petition Evaluation prepared by the California Department of Fish and Wildlife (CDFW). While the Sanitation Districts are not taking a position regarding the application of CESA to Steelhead in Southern California, we wish to provide the California Fish and Game Commission (Commission) and CDFW with information about our operation to help inform the decision making processes of the Commission and CDFW as to the potential consequences of listing as related to our operations. To provide some background, the Sanitation Districts are a confederation of 24 independent special districts serving approximately 5.6 million people in Los Angeles County (County). The Sanitation Districts' service area covers approximately 850 square miles and encompasses 78 cities and unincorporated territory within the County. The Sanitation Districts construct, operate, and maintain facilities to convey, treat, recycle, and dispose of wastewater and industrial wastes and generate recycled water, bioenergy, and biosolids as byproducts of the treatment process. As such, the Sanitation Districts are requesting that if the Steelhead listing proceeds, CDFW and the Commission also develop a Section 2084 regulation and Section 2081(d) rule that is protective of the species, yet allows the Sanitation Districts to continue activities necessary to support their essential function of providing wastewater treatment and related services, including but not limited to discharge, monitoring and the provision of recycled water, to County residents and businesses.

Description of Sanitation Districts Operations Potentially Affected by Steelhead CESA Listing

Facilities

Among other facilities, the Sanitation Districts operate a network of inland water reclamation plants designed to produce high quality recycled water for municipal reuse. Not all the recycled water is currently utilized by our partner water agencies however and the remaining flows must be discharged to inland surface water bodies. A portion of the recycled water that is used is also discharged to inland rivers which are used as conveyance to downstream uses. The Sanitation Districts currently discharge over 30 million gallons per day (MGD) into the San Gabriel River and its tributaries (San Jose Creek and Coyote Creek), from five water reclamation plants (WRPs) under National Pollutant Discharge Elimination System (NPDES) permits issued by the Los Angeles Regional

Water Quality Control Board (Regional Board) (see Figure1). Conditions in the San Gabriel River are unsuitable for promotion of Steelhead under baseline conditions. For example, the portions of the San Gabriel River and tributaries in which these treatment facilities discharge are highly managed, highly modified, mostly concrete lined, and receive little flow from other sources other than stormwater runoff. The only reason there are measurable flows on a seasonal basis is due to the artificial condition of wastewater discharges. There is no affirmative duty under CESA to maintain an artificial condition. Further, the National Marine Fisheries Service January 2012 Southern California Steelhead Recovery Plan (Recovery Plan) found that restoring conditions for Southern California Steelhead in the San Gabriel River would require multiple long-term measures related to water management, recreation, and urban development. It went on to state that a fish passage barrier inventory and assessment for the watershed should be conducted as there are several operating dams that impede fish passage. It is our understanding that any use of the reaches we discharge to for Steelhead recovery would be solely for migration on a seasonal basis.

The Sanitation Districts also own and operate two additional water reclamation plants that discharge approximately 18 MGD into the Upper Santa Clara River, constituting most of the surface flow in portions of that waterbody where surface flow is present. The reaches of the Santa Clara River where discharges occur are separated by a “dry gap” from coastal reaches with surface flow and are far upstream of Piru Creek, the limit of potential Steelhead habitat identified in the Recovery Plan. Thus, it is our understanding that the Santa Clara River upstream of Piru Creek is not a focus of the potential CESA listing and our remaining comments in this letter focus on the San Gabriel River.

Recycled Water and CA Water Code Section 1211 Approved Petitions

Any listing decision should consider the current instream conditions, as well as current and future discharges of recycled water to the San Gabriel River. These discharges vary seasonally and are heavily managed by the Los Angeles County Flood Control District. The Sanitation Districts’ goal is to maximize reuse. The Sanitation Districts work with regional and local water agencies to develop these recycled water projects and are actively working on the development of several new projects in the region due to the need to develop additional local climate-resilient water supplies, which can help local and regional municipalities reduce reliance on imported water and ease the pressure on distant watersheds that support habitat for a number of threatened and endangered species. There is significant demand for the Sanitation Districts to supply additional recycled water to local water agencies to the extent to which it is available.

To this end, after numerous years of working with CDFW and the State Water Resources Control Board, the Sanitation Districts obtained approval for several California Water Code Section 1211 Petitions that allow us to reduce our combined discharge to a total of 7 MGD (5 MGD from our San Jose Creek WRP and 2 MGD from our Los Coyotes WRP) to the San Gabriel River. These approved Section 1211 Petitions allow us to provide additional recycled water for reuse to local water agencies without impacting riparian habitat or special status species. The permits require the Sanitation Districts to monitor the surrounding riparian habitat using an adaptive management approach to protect the least Bell’s vireo, an endangered avian species. Further, as part of the adaptive management plan, a habitat management committee, which includes participation by CDFW and the United States Fish and Wildlife Service, reviews the collected data collected and provides future recommendations. Because these petitions were only recently approved, the reductions in discharges to the San Gabriel River have not yet occurred. The Sanitation Districts expect to reach these levels of minimum discharge over the next decade as new recycled water projects are implemented.

In addition to minimum discharges to comply with the Section 1211 Petitions, the Sanitation Districts also use the San Gabriel River and its tributaries to convey recycled water from our WRPs to their point of use. Recycled water produced at our WRPs and not used for municipal purposes is discharged for percolation and conveyance downstream. Unlined portions of the San Gabriel River and adjacent engineered spreading basins are used as part of the Montebello Forebay Groundwater Recharge Project to capture recycled water to augment local groundwater supplies. Los Angeles County Flood Control District operates the river and spreading basins to maximize conservation of recycled water and stormwater. During most times of the year, the vast majority of the discharges from the San Jose Creek, Whittier Narrows and Pomona WRPs are captured and conserved.

Excess Recycled Water Discharge

The Sanitation Districts also wish to emphasize that, while we take our responsibility to protect the beneficial uses and habitat of the waterbodies to which we discharge very seriously, we also have a primary responsibility to provide the essential public service of wastewater treatment to approximately 5 million people residing in the Los Angeles Basin; this service must be available on a continuous basis. While supplying recycled water is also an important function, recycled water demand fluctuates diurnally (due to daily usage patterns) and seasonally. Moreover, the amount of wastewater production fluctuates over time, whether it be due to flow reductions attributable to water conservation or peak wet weather flows that occur during and immediately after storms. During winter months and during storm events, demand for recycled water is lower, and more treated wastewater must be discharged to the environment. In short, wastewater treatment and the ability to discharge must always be available, as the volume of water is significant and cannot be directly controlled by the Sanitation Districts. The variability of the flows must also be taken into account when considering the application of discharge standards. While it may be feasible to treat our recycled water to be suitable for Steelhead migration at low flows, it may be infeasible to provide that treatment for all flow after a rain event when recycled water demands are minimal. If discharges were to continue, the Sanitation Districts could be required to construct and maintain very large-scale treatment facilities that only operate a few times of year. There is likely not sufficient space available at our WRPs to provide higher levels of treatment for all the flow.

Treatment Requirements

It is our understanding that if a CESA listing is adopted, the Water Quality Control Plan, Los Angeles Region (Basin Plan) may need to be modified to reflect updated beneficial uses (e.g. for endangered species) and accompanying water quality standards for constituents such as temperature and ammonia toxicity could be adopted by the Regional Board to protect these beneficial uses. The Sanitation Districts are concerned with having to comply with far more stringent effluent limitations to support this beneficial use (potentially at all times of the year) despite the absence of Steelhead in the San Gabriel River under baseline conditions and the presence of Steelhead in the San Gabriel River in the vicinity of our discharges would only occur during migration. The cost, energy, and greenhouse gas emissions for having to construct and operate additional treatment facilities would be substantial. CDFW should consider these costs and other factors when determining if conditions in the San Gabriel River watershed are suitable for Steelhead recovery.

Monitoring Programs

The Sanitation Districts conduct extensive water quality monitoring activities in the San Gabriel River and Santa Clara River. In addition to implementation of an extensive monitoring and reporting program in and around the discharges from the WRPs to the San Gabriel and Santa Clara Rivers, the Sanitation Districts fund and participate in the San Gabriel River Regional Monitoring Program, which is a watershed-wide monitoring program that has been active for over 16 years. All of these monitoring activities are required by the Regional Board and are contained in our NPDES permits.

Request for Pre-Emptive Consultation and Accommodation for Essential Public Services

Notwithstanding our understanding that the reaches of the San Gabriel River to which our facilities discharge are not likely suitable for Steelhead recovery under the CESA listing (and dry reaches upstream of the San Jose Creek and Pomona WRPs make those reaches unsuitable as well), if CDFW decides to accept the petition for consideration, it's our understanding that the Commission can adopt regulations under Section 2084 of the California Fish and Game Code to authorize the taking of a candidate species, subject to terms and conditions it prescribes, based on the best available scientific information. Under Section 2084, CDFW may also recommend to the Commission that it authorize the taking of an endangered, threatened or candidate species. The Sanitation Districts would be glad to work with CDFW and the Commission to develop a Section 2084 regulation that is protective of the species, yet allows the Sanitation Districts to continue activities necessary to support their essential function of providing wastewater treatment services to Los Angeles County residents and businesses.

At this time, the Sanitation Districts recommend that CDFW propose and the Commission adopt a Section 2084 regulation that authorizes the exceptions to the take prohibition described below. These incidental take authorizations would support critical operations, maintenance and capital activities required to provide reliable wastewater services to protect public health, safety, and the environment. In crafting a Section 2084 regulation that accommodates these authorizations, the Sanitation Districts are ready and willing to collaborate with CDFW and the Commission to develop best management practices and other measures to provide for conservation of the species. Furthermore, if the Commission decides to ultimately list the Southern California Steelhead, the Sanitation Districts request CDFW consider adopting a rule pursuant to section 2081(d) that contemplates the same incidental take authorizations.

Incidental Take Authorizations Being Requested

1. Take authorization as it relates to the Sanitation Districts' previously approved Section 1211 permits, and any of their successors.

As noted above, increasing recycled water supplies is urgently needed to address the State's water crisis. The Sanitation Districts spent over 5 years working with CDFW to develop an adaptive management plan to ensure riparian habitat and special status species will not be impacted by the reduction in discharge to the San Gabriel River from Sanitation Districts' WRPs. The discharge reduction enables more recycled water to be beneficially reused, thereby providing a resilient water supply source. Given the long history of Sanitation Districts' partnership with CDFW in these efforts, the Sanitation Districts believe it is appropriate to exempt actions undertaken pursuant to implementation of conditions contained in approved the 1211 petitions

2. Take authorization to allow required monitoring to be conducted per NPDES permit Monitoring and Reporting Programs and the San Gabriel River Regional Monitoring Program.

The Sanitation Districts conduct routine monitoring for discharges into the San Gabriel and Santa Clara River watersheds as part of implementation of NPDES permit requirements. The Sanitation Districts also participate in implementation of the San Gabriel River Regional Monitoring Program (www.sgrtmp.org). If best management practices are adhered to, these water quality monitoring activities should be identified as exempt from "incidental take" as they not only help ensure that NPDES permit limits are being met, but also that public health and the environment are protected.

3. Take authorization to allow the Sanitation Districts to discharge more flow (compared to average or dry weather conditions) to the San Gabriel River and its tributaries during wet weather or due to other conditions that may periodically occur, such as maintenance or repair to a recycled water system.

When there is a reduction in demand for recycled water from one of its WRPs in the San Gabriel River Watershed or during wet weather conditions, the water reclamation plants have historically discharged higher than average flow into the San Gabriel River. For flood control and other public health and safety reasons, the Sanitation Districts need to maintain the flexibility to be able to continue this historic practice.

4. Take authorization to allow the Sanitation Districts to adhere to the temperature compliance schedules in our NPDES permits, including any related studies.

As mentioned previously, within the San Gabriel River, the Sanitation Districts have five WRPs with NPDES permits issued by the Regional Board. Each of those permits, which were renewed in 2021, contains a ten-year temperature compliance schedule that will allow the Sanitation Districts to identify and implement measures needed to comply with Basin Plan temperature objectives. The Sanitation Districts are also required to conduct studies as part of their compliance. Providing this exception will allow the Sanitation Districts to maintain compliance with their NPDES permits and assure compliance with Los Angeles Region Basin Plan temperature objectives. Similar activities to conduct studies and comply with Los Angeles Region Basin Plan temperature objectives are expected to be included in NPDES permit updates scheduled during 2022 for the two WRPs that discharge to the Upper Santa Clara River, and this exception should be applied there as well.

5. Take authorization to allow continued rotation of discharge from our San Jose Creek and Whittier Narrows WRPs to each of the various NPDES permitted outfall discharge locations.

Historically, discharge from the San Jose Creek WRP rotates to various NPDES permitted outfall discharge locations. This has been done to maximize recycled water deliveries, maintain habitat, ensure public safety, and allow for system maintenance. Before, during, and after storm events, the Los Angeles County Department of Public Works may switch discharge locations for flood control purposes and to maximize stormwater capture. This flexibility and practice of rotating discharges must be allowed to continue in order to support this diverse range of public-interest goals.

Once again, we thank you for the opportunity to provide these comments and look forward to working with CDFW and the Commission. For any questions, please contact the undersigned at (560) 908-4288, ext. 2701 or rtremblay@lacs.org.

Very truly yours,



Raymond L. Tremblay
Department Head
Facilities Planning

RLT:JL:pb

Enclosure

cc: Melissa Miller-Henson, Executive Director, FGC
Charles Bonham, Executive Director, CDFW

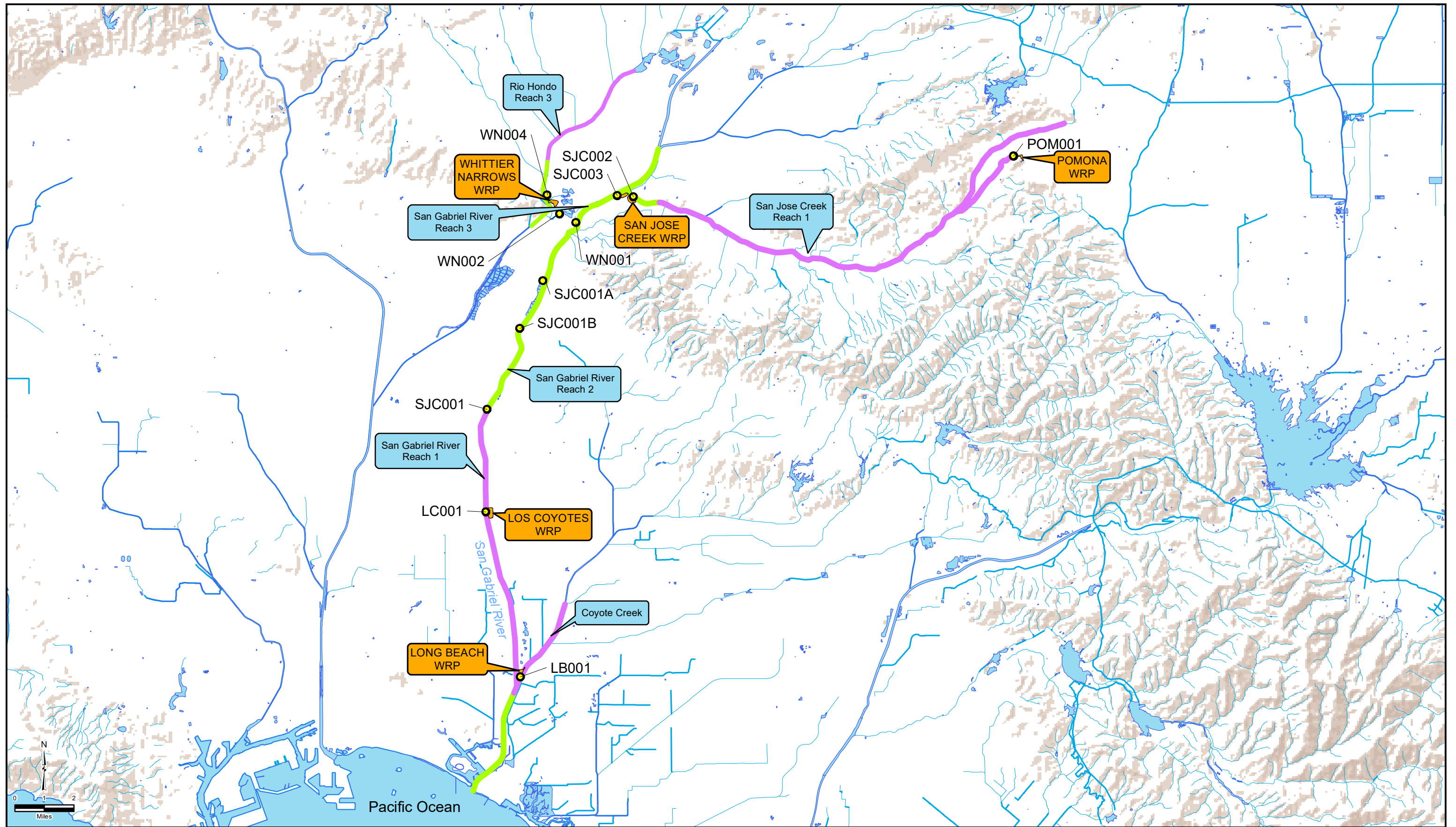


FIGURE 1

WRP Discharge Location (some not used frequently)	Lined Channel
WRP	Unlined Stream Bottom

LACSD Discharges to San Gabriel River System
November 08, 2021
R:\Planning\GIS-Team\Wastewater\projects\SanGabrielRivSysDischargeWRPs.mxd | DOC#: 4445090

ATTACHMENT 2

FIGURE 1
SANTA CLARITA VALLEY WATER RECLAMATION PLANTS AND SANTA CLARA RIVER SEASONAL FLOW



Legend

- Water Reclamation Plant
- WRP Discharge Point

0 0.2 0.4 Miles



Legend

- Dry Gap
- Water Reclamation Plant
- Santa Clara River
- Creek

0 3 6 Miles

LOS ANGELES COUNTY SANITATION DISTRICTS
 Converting Waste into Resources

* Dry Gap Data provided by San Francisco Estuary Institute and Aquatic Science Center: <https://www.sfei.org/projects/VenturaHE>

ATTACHMENT 3



memorandum

date April 2, 2024
to Santa Clarita Valley Water Agency
cc
from Joel Mulder
subject Review of Current and Historical *Oncorhynchus mykiss* Occurrences in the Upper Santa Clara River Watershed (Los Angeles County)

Purpose

ESA has prepared this technical memorandum (memo) for Santa Clarita Valley Water Agency to review and document available information on the current and historical distribution of *Oncorhynchus mykiss* (*O. mykiss*), including both the anadromous (southern California steelhead, referred to as steelhead herein) and resident (rainbow trout) life history forms of the species, in the upper Santa Clara River watershed within Los Angeles County (i.e., the watershed upstream of the Piru Dry Gap¹). Information from a variety of sources is summarized in this memo, including biogeographic datasets, state and federal documents, peer-reviewed publications, historical source compilations, non-governmental organization information, and survey data.

Biogeographic Datasets

A query of California Department of Fish and Wildlife (CDFW) California Natural Diversity Database data (both processed and unprocessed data) found no documented occurrence of steelhead in the Santa Clara River watershed upstream of the Piru Creek confluence.

The CDFW Biogeographic Information and Observation System online mapping tool (BIOS) layers for steelhead range and distribution offer conflicting mapping of southern Steelhead distribution, as described below.

Winter Steelhead Range (ds699).

This dataset, developed by CDFW, contains all CalWater 2.2.1 Planning Watersheds where CDFW has documented winter run steelhead to be present (representing planning watersheds intersecting the known distribution, which is based on where the species has been observed and reported) during or after 1990. This

¹ Beginning about 3.5 river miles downstream of the Los Angeles - Ventura County line, the Santa Clara River surface flow is infiltrated into the underlying eastern Piru groundwater basin. Surface flow reappears approximately 6 miles downstream, past the confluence of Piru Creek. The river is dry through this reach most of the year, with water present only when rainfall events create sufficient stormwater runoff into the river (GSI 2008, LARWQCB 2007). This dry ephemeral reach of the river is informally known as the "Piru dry gap" in the Santa Clara River.

dataset does not show winter steelhead range as occurring in the Santa Clara River watershed upstream of the Piru Creek confluence.

Winter Steelhead Distribution (ds340)

This dataset, developed by CDFW, depicts observation-based stream-level geographic distribution of anadromous winter-run steelhead in California. It was developed for the express purpose of assisting with steelhead recovery planning efforts. The distributions reported in this dataset were derived from a subset of the data contained in the Aquatic Species Observation Database (ASOD), a Microsoft Access multi-species observation data capture application. Data source contributors, as well as CDFW fisheries biologists, have been provided the opportunity to review and suggest edits or additions during a recent review. Data contributors were notified and invited to review and comment on the handling of the information that they provided. The distribution was then posted to an intranet mapping application, and CDFW biologists were provided an opportunity to review and comment on the dataset. During this review, biologists were also encouraged to add new observation data. The dataset does not show steelhead distribution as occurring in the Santa Clara River watershed upstream of the Piru Creek confluence.

Southern California Steelhead Range (ds1290)

This dataset, developed by the University of California at Davis (U.C. Davis), shows a species extant range layer for steelhead by HUC12 watersheds based on datasets and interpreted by PISCES, which is software and data describing the best-known ranges for California's 133 native fish and numerous non-native fish. PISCES “models” presence, with corresponding probabilities if appropriate, based on expert opinion and observation data. PISCES biogeographic modeling outcomes reflect environmental and anthropogenic variables that “predict” where a given species may occur (Santos et al. 2014). The metadata for the layer describes the references for the datasets interpreted by PISCES as Moyle, Quinnes and Bell (expert opinion) and NMFS Southern California Steelhead ESU Current Stream Habitat Distribution Table.pdf. It is not clear what the source is for the NMFS current stream habitat distribution table.

There are two primary layers in the PISCES model for steelhead. One is HUC12 watersheds with observations of *O. mykiss*. No HUC12 watersheds upstream of the Piru Creek confluence are shown as having positive observations. The other layer is a “historical expert” layer, which depicts HUC12 watersheds where steelhead occurred historically based on expert opinion. This layer shows steelhead occurring in the HUC12 watersheds containing the mainstem from Piru Creek upstream to about Soledad Canyon, and Castaic Creek, based on expert opinion but not on observational data.

Coastal Steelhead Trout Watersheds (ds962)

This dataset, developed by CDFW, provides a minimal set of watershed fields used to identify coastal steelhead management units. This data set is an extract of the California Watershed (CalWater) dataset. It has been generalized to hydrologic sub-areas for those watersheds that are considered part of the coastal steelhead range. However, the source data for the inclusion of hydrologic units in the “coastal steelhead trout range” is not cited or referenced in the dataset metadata. The dataset depicts hydrologic units in the upper Santa Clara River basin (upstream of the Piru Creek confluence) as coastal steelhead watersheds.

Federal and State Documents

Federal Endangered Species Act designated critical habitat for southern California steelhead in the Santa Clara River watershed extends from the Pacific Ocean, upstream the main Santa Clara River to the confluence with Piru Creek; critical habitat in the Santa Clara River does not extend beyond the confluence with Piru Creek (70 FR 52487).

In the NMFS population characterization for steelhead recovery planning, the discussion of the Santa Clara River states “The available evidence suggests that steelhead have been limited to the western part of the Santa Clara basin (Kelley 2004)” (Boughton et al. 2006). The document uses Boughton and Goslin’s (2006) over-summering habitat model (described below) as the basis for its findings.

Boughton and Goslin (2006) developed a model of potential steelhead over-summering habitat using the method of environmental envelopes. Under the envelope method, predicted habitat is the set of stream segments falling within the same range of conditions that encapsulate the known occurrences of the species. In the discussion of results from the Los Angeles Basin, the authors note “The model predicted a distinct patch of potential habitat in the far eastern end of the Santa Clara basin (upper right quadrant, east of Newhall). This did not conform to expectations. Reports from the area suggested that steelhead were confined to the western end of the Santa Clara system. Visits to the eastern area between Newhall and Palmdale indicated that this area is drier than implied by the model, due to a rain-shadow effect from the San Gabriel Mountains (C. Swift, personal communication, Entrix). It probably did not contain potential habitat in reality”. In their discussion of the model’s environmental envelope outputs, the authors note that the Southern California Coast ESU² may have more false positives (warm areas with no potential for thermal refugia), but that these false positives may occur at a finer resolution than addressed by the model. In other words, the model may indicate suitable habitat in some areas of Southern California where in reality temperatures and lack of thermal refugia preclude steelhead occurrence.

In NMFS’ 2023 5-Year Review for the species, there is no mention of areas of the Santa Clara River watershed upstream of the Piru Creek confluence (NMFS 2023). In the Southern California Steelhead Recovery Plan (NMFS 2012) discussion of current watershed conditions the only mention of the Santa Clara River watershed upstream of the Piru Creek confluence is that “Fish passage is further impacted by the operation of Castaic Dam on Castaic Creek”. Table 2-1 of the Recovery Plan lists the Santa Clara River watershed as historically occupied by steelhead, citing Becker et al. 2009, Boughton et al. 2005, and Titus et al. 2010 (NMFS 2012). A discussion of those sources is provided below, with a focus on historical occurrences in the upper watershed.

Boughton et al. (2005) assessed the current occurrence of anadromous *O. mykiss* in each coastal basin of southern California in which it occurred historically. While the current and historical occurrences in the Santa Clara River are not described specifically in the memorandum, Figure 4 shows the historic distribution of spawning and rearing basins for steelhead in southern California. The figure shows the Santa Clara River basin up to approximately the Ventura-Los Angeles County line as historically occupied. The figure notes that shading of entire basins implies only that steelhead occurred somewhere, not necessarily everywhere, in a basin. The source

² Listed steelhead are now referred to as a “distinct population segment” (DPS), which is not recognized in the scientific literature. In 1991, NMFS issued a policy for delineating Pacific salmon DPS (56 FR 58612; November 20, 1991). Under this policy a group of Pacific salmon populations is considered an “evolutionarily significant unit” (ESU) if it is substantially reproductively isolated from other conspecific populations, and it represents an important component in the evolutionary legacy of the biological species. Further, an ESU is considered to be a DPS (and thus a “species”) under the ESA.

for the historical occurrence data for the figure is noted as Titus et al. 2003, Stoecker et al. 2002, and a third source which was omitted from the figure description (text is cut off). Further discussion of Titus et al. is provided below. Stoecker et al. (2002) is a report on steelhead assessment and recovery opportunities in southern Santa Barbara County as is not relevant to the Santa Clara River.

The Titus et al. 2003 in preparation document cited in Boughton et al. 2005 and Titus et al. 2010 in preparation document cited in the species recovery plan (NMFS 2012) is cited as several sources under different publication years as the document has been in draft form with various updates for some time. As of April 2, 2024, the manuscript is still a draft³. The report provides stream-specific information on steelhead in central and southern California gathered from three main sources: (1) A literature search of pertinent journal articles, CDFW (known as California Department of Fish and Game until 2013) administrative reports and fish bulletins, and other resource agency, university, and consultant publications; (2) Resource agency files, especially CDFW stream survey files; (3) Interviews conducted with professional biologists, academicians, and representatives of sportfishing organizations and other special interest groups for information from personal files, and anecdotes based on personal observations. The report's description of the Santa Clara River Headwater Tributaries in Los Angeles County states no historical evidence of steelhead runs. San Francisquito Canyon and Soledad Canyon are noted as two streams for which there are CDFW records for rainbow trout presence and/or stocking dating back to circa 1930.

Non-Governmental Organization Resources

Becker et al. (2009) summarizes historical accounts of *O. mykiss* in streams south of San Francisco Bay based on thousands of documents in public and private collections, and interviews with biologists. Only three areas in the upper Santa Clara River watershed are described in the report as having fish observations. It is important to note that these observations are for fish in general, and not specifically steelhead.

Elizabeth Lake Canyon, tributary to Castaic Creek - Field notes from US Forest Service staff from 1947 indicate that “some fish” were caught in Elizabeth Lake Canyon Creek in the previous season (CDFG 1952). The author noted that the creek was unlikely to support fish life throughout the year, presumably due to low flow.

Fish Canyon, tributary to Castaic Creek - A 1956 CDFW stream inventory for Fish Canyon Creek states, “...some native fish reported in upper reaches” (CDFG 1956b). It adds, “This is definitely a marginal water...”

Bouquet Canyon - According to CDFW records, rainbow trout fry from the Shasta hatchery were planted in Bouquet Canyon Creek in 1943 (CDFG 1943). A 1947 stream survey indicates that *O. mykiss* including a “few fingerlings” were observed in the creek but notes, “Fishing maintained only by frequent plantings” (CDFG 1947b).

In a previous document, Becker et al. (2008) appears to acknowledge the unreliable nature of these observations in Figures 24 and 25 of the report, describing the historic and current, respectively, status of *O. mykiss* in coastal streams of southern Ventura County. In the figures, Castaic Creek and its tributaries, as well as San Francisquito and Bouquet Canyon creeks, are shown as “unknown or insufficient data”. Paradoxically, the mainstem Santa Clara River upstream of the Piru Creek confluence is shown as “definite run or population” despite no

³ Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=10194>

documentation in the report of any observations currently or historically in that section of river. CalTrout, an organization focused on healthy waters and resilient wild fish, provides on The Southern Steelhead page of their website⁴ as well as their publication “SOS II: Fish in Hot Water: Status, threats and solutions for California salmon, steelhead, and trout” a map of current and historical steelhead range. The source of the map is noted as PISCES (2017). See the discussion above under Biogeographic Datasets - Southern California Steelhead Range (ds1290) for PISCES.

The conservation group Trout Unlimited’s website⁵ provides maps of the historical and current status of *O. mykiss* in coastal streams of southern Ventura County, California. Both maps show the mainstem of the upper Santa Clara River from the Piru Creek confluence up to about the N3 Angeles Forest Highway as historically and currently having a “definite run or population”. However, the cited source for these maps is Becker et al. 2009, described above, which does not appear to substantiate the steelhead historical and current distribution depicted on these figures.

Other Sources

Stoecker and Kelley (2005) analyzed the habitat conditions, population status and barriers to migration for steelhead in the lower Santa Clara River watershed from the Piru Creek tributary downstream, including significant drainages. There is no mention of steelhead resources upstream of the Piru Creek confluence.

Bowers (2008) compiled historical steelhead accounts in Ventura County, primarily from newspaper accounts, personal fishing logs, books, pamphlets, and Ventura County Board of Supervisors’ Minutes. Because the report looked at Ventura County, little mention is made of the upper Santa Clara River watershed in Los Angeles County except two articles from the Santa Paula Chronicle. The first, in 1925, noted five thousand “trout” were planted in Bouquet Canyon. The second, in 1943, described Bouquet Canyon as being “in good shape with plenty of good-sized fish left over from last year’s plant”, presumably referring to planted *O. mykiss*.

Bell (1978) described the fishes of the Santa Clara River and made collections at 46 stations from the river mouth upstream as far as water existed. In the upper watershed, this included San Francisquito Creek, Castaic Creek, Arrastre Canyon, and the mainstem river. No *O. mykiss* were encountered. Bell cites Hubbs (1946) as reporting large and consistent runs of *Salmo gairdneri* (the former scientific name for *O. mykiss*) in the Santa Clara River. However, Bell notes that at the time of his survey, *Salmo* were abundant in Sespe Creek, but Piru Creek and the Santa Clara mainstem were much less suitable habitat, and trout were restricted to a few deep holes in Piru Creek and as escapees to the mainstem from Fillmore fish hatchery. No mention is made of trout in the upper watershed.

Numerous fish sampling events have been conducted in the upper Santa Clara River, particularly the mainstem, in more recent years. Table 1 below presents a list of the sources examined. No *O. mykiss* were encountered in any of the surveys.

⁴ Available at: <https://caltrout.org/sos/species-accounts/steelhead/southern-steelhead#:~:text=Southern%20Steelhead%20Distribution&text=They%20are%20most%20abundant%20in,Ventura%2C%20and%20Santa%20Clara%20rivers>

⁵ Available at: <https://www.tu.org/california-coastal-steelhead-data/>. Figure 24 — Historical and current status of *Oncorhynchus O. mykiss* in coastal streams of southern Ventura County, California; Figure 25 - Current status of *Oncorhynchus mykiss* in coastal streams of southern Ventura County, California.

TABLE 1
SUMMARY OF FISH SPECIES PRESENCE IN UPPER SANTA CLARA RIVER WATERSHED BASED ON LITERATURE REVIEW

Santa Clara River Reach ^a and Location		Unarmored Three spine Stickleback	Santa Ana Sucker	Arroyo Chub	Prickly Sculpin	Common Carp	Mosquitofish	Black Bullhead	Fathead Minnow	Green Sunfish	Largemouth Bass	Goldfish	Sailfin Molly	Convict cichlid	Source
SCR	SCR Watershed	X	X	X		X			X	X	X				Bell 1978, Swift et al. 1993
6	Bouquet Canyon area			X	X	X							X		Compliance Biology 2010
6	SWRP outfall channel												X		Dellith Pers. Comm. 2023
6	Iron Horse Bridge area	X													CDFW 2021
6	Iron Horse Bridge area		X	X											CDFW 2022
6	Iron Horse Bridge to VWRP	X	X	X											Haglund & Baskin 2000
6	McBean Parkway area	X				X									Hovore et al. 2008
5/6	Bouquet Cyn. to Castaic Ck.	X	X	X											Haglund & Baskin 1995
5/6	Bouquet Cyn. to Castaic Ck.	X	X	X											Impact Sciences Inc. 2003c
5/6	Saugus to Castaic Ck.	X	X			X									Haglund 1989
5	I5 to Castaic Ck.	X	X												Aquatic Consulting Services 2002a
5	Old Road to VWRP	X	X												CDFW 2015
5	Old Road to VWRP	X	X	X		X		X			X				Pareti Pers. Comm. 2003
5	VWRP to Salt Ck.		X	X		X	X	X							Cardno 2015
5	VWRP to Salt Ck.	X	X	X											ENTRIX Inc. 2006a
5	Commerce Center Dr. to Salt Ck.	X	X	X	X	X				X					ENTRIX Inc. 2010
5	Commerce Center Dr. to Salt Ck.	X	X	X											Dudek 2010
5	Castaic Ck. to u.s. 7.2mi	X	X	X	X	X				X	X	X			Impact Sciences Inc. 2003b
5	Commerce Center Dr. to Castaic Ck.	X	X	X											Aquatic Consulting Services 2002b
5	Commerce Center Dr. to Co. Line	X	X	X		X				X					Aquatic Consulting Services 2002c
5	Castaic Ck. to d.s. 7mi	X	X	X	X	X				X					Impact Sciences Inc. 2003a
5	Castaic Creek to Long Cyn.	X	X	X		X									ENTRIX Inc. 2006b
5	Castaic Ck. to Long Cyn.	X	X	X											Impact Sciences Inc. 2010
5	u.s. of San Martinez Grande Cyn.	X													USFWS 1980
5	u.s. of San Martinez Grande Cyn.	X	X	X		X	X		X						USFWS 1985

NOTES:

Blue shading = Native species, native to Study Area

Green shading = Native to Southern California

No shading = Not native to California (introduced)

a. Reaches delineated according to LARWQCB water body names

Discussion

In review of the available information, no verifiable or concrete observations of native *O. mykiss* in the upper Santa Clara River watershed have been described or recorded historically or currently. Observations that potentially could have been native *O. mykiss* are described in Becker et al. 2009. However, observations of “some

fish” or “some native fish” in Elizabeth Canyon and Fish Canyon do not specifically mention *O. mykiss*. The references could be to other native fish in the upper watershed such as threespine stickleback (*Gasterosteus williamsoni*) which were formerly more common in the upper headwater tributaries (Bell 1978). Titus et al. (*In preparation*) also notes San Francisquito Canyon and Soledad Canyon as two streams for which there are CDFW records for rainbow trout presence and/or stocking dating back to circa 1930.

These observations may all well have been planted trout. As described in Titus et al. (*In preparation*) above and in newspaper accounts (Bowers 2008), extensive stocking was occurring in the upper watershed as early as 1925, and it would have been impossible to distinguish native resident trout or steelhead from stocked trout.

Given these unreliable historic accounts and lack of any other verifiable observations, it is of concern that Becker et al. 2008 and Titus et al. (*In preparation*) appear to be the basis for some historic and current distribution maps for southern California steelhead in the upper Santa Clara River (e.g., Boughton et al. 2005, Trout Unlimited), particularly since Becker et al. 2008 itself shows occurrence maps in upper watershed tributaries where there are questionable fish observations as “unknown or insufficient data”. It is also not apparent why the upper watershed is considered to have been historically occupied by experts for the U.C. Davis PISCES model, and historically and currently occupied in Figures 24 and 25 of in Becker et al. 2008 despite the absence of observations. Perhaps the underlying assumption is that because the lower Santa Clara River had a well-documented and robust steelhead run (Hubbs 1946, Stoecker and Kelley 2005, Bowers 2008), fish would have inevitably made their way all the way up the river to the upper basin headwaters. However, an examination of habitat conditions in this area suggests that the habitat in the upper basin may have precluded or greatly limited steelhead migration in most years, and that even in particularly wet years when migration was possible, available upstream spawning and over-summering habitat was and is extremely limited or of poor quality.

The Santa Clara River is a perennial stream from Interstate 5 downstream to just west of the Los Angeles - Ventura County line. Beginning about 3.5 river miles downstream of the county line the entire surface flow is infiltrated into the underlying eastern Piru groundwater basin. Surface flow reappears approximately 6 miles downstream, past the confluence of Piru Creek. The river is dry through this reach most of the year, with water present only when rainfall events create sufficient stormwater runoff into the river (GSI 2008, LARWQCB 2007). This dry ephemeral reach of the river is informally known as the “Piru dry gap” in the Santa Clara River. Flood flows in the Upper Santa Clara River increase, peak, and subside rapidly in response to high-intensity rainfall. The “flashy” hydrograph produced by these conditions shows a rapid increase in discharge over a short time period with a quickly developed peak discharge compared to normal baseflow (Kennedy/Jenks 2014). Thus, migration opportunities through the dry gap for upstream migrating steelhead adults and downstream migrating smolts would have historically been limited to typically brief high flow events. The same is true under current conditions, though flows through the dry gap may be artificially altered in duration due to releases from or withholding in upstream reservoirs (e.g., Castaic Lake).

Habitat conditions in the upper watershed tributaries are described in historic accounts as generally poor for *O. mykiss*. For example, field notes from US Forest Service staff from Elizabeth Lake Canyon Creek in 1952 note that the creek was unlikely to support fish throughout the year “presumably due to low flow”, and in 1956 regarding Fish Canyon “This is definitely a marginal water...”, and in Bouquet Canyon Creek, 1943, “Fishing maintained only by frequent plantings” (Becker et al. 2009). Boughton and Goslin (2006) acknowledge that the watershed between Newhall and Palmdale is subject to a rain-shadow effect from the San Gabriel Mountains and “probably did not contain potential habitat in reality”. No current information or surveys reviewed suggest that

suitable habitat for *O. mykiss* is extant in the upper basin tributaries. Becker et al. (2010) analyzed information on rearing habitat to identify regionally significant watersheds, which are those offering the greatest potential for producing steelhead smolts, including over-summering opportunities and conditions favoring high growth rates. Within these watersheds the report identifies "essential" streams or reaches that offer the best habitat resources. Within the upper Santa Clara River watershed, portions of the mainstem and several tributaries are identified as "essential" stream, but no waterbodies in the upper watershed are identified as "available" or "suitable" *O. mykiss* habitat (see Figure 14 in the report).

In conclusion, there is no record of current *O. mykiss* occupation in the upper Santa Clara River watershed (east of the Piru Creek confluence) on which to support any determination of species "presence". Despite extensive fish sampling in the area over the last few decades, no *O. mykiss* have been encountered. Habitat conditions currently do not suggest suitable habitat is present for this species in the area.

There are no verifiable or concrete historical observations of native *O. mykiss* in the upper Santa Clara River watershed, and historical descriptions of habitat conditions do not suggest suitable, perennial habitat was present for *O. mykiss* in the area.

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