

Santa Clara River Temperature Study
TAC Meeting
Wednesday, August 13, 2025
11:00 am – 1:00 pm
Microsoft Teams Meeting

Agenda

- A. Introductions
- B. Project Background
- C. Temperature Monitoring and Modeling Results
- D. Laboratory Fish Thermal Physiology Studies
- E. Benthic Macroinvertebrate Sampling/ Stickleback Observations
- F. Next Steps

Attendees

Santa Clarita Valley Sanitation District (LACSD): Ajay Malik, Jodie Lanza, Erika Bensch, Katie Marjanovic, Josh Westfall, Thomas Parker, Liz Roswell, Ray Tremblay, Ziad El Jack

Santa Clarita Water (SCV Water): Ali Elhassan, Steve Cole, Najwa Pitois

Environmental Science Associates (ESA): Andy Collison, Ramona Swenson, Joel Mulder

University of California, Davis (UCD): Nann Fangue, Ken Zillig, Cassidy Cooper

SCCWRP: Eric Stein, Kris Taniguchi-Quan, Lara Jansen

State Water Board: Ryan Ham

Los Angeles Regional Board: Jeong-Hee Lim, Steven Webb, Veronica Cuevas, Celine Gallon, Stefani Daryanto

Robertson Bryan (RBI): Michael Bryan

FivePoint: Matt Carpenter

Resource Conservation District of Santa Monica Mountains (RCDSMM): Rosi Dagit

Summary

- **Eric Stein (SCCWRP)** kicked off the meeting and reviewed agenda and meeting goals. Katie Marjanovic (LACSD) provided background on the technical studies and compliance schedule.
- **Andy Collison (ESA)** reviewed data from the ongoing temperature monitoring effort. Then Collison covered the structure and scenarios of the temperature model as well as the model outputs for 2022 and 2024. The model scenarios include the existing conditions, 80°F temperature cap, and 50% and 100% flow reductions. Collison clarified that the model is less reliable downstream of the confluence with Castaic Creek or at very low flows. The preliminary findings from the temperature modeling effort are the following:
 - Modeled river temps exceeded 80°F less frequently during a wet year than a dry year under existing discharge conditions (dilution effect)
 - River and wastewater temperatures are influenced by ambient conditions/ water year type
 - During a dry year, downstream river temps would exceed 80°F even in absence of WRP discharge or if the discharge was cooled to 80°F
 - The up- and downstream temp difference was greater than 5°F under all modeled

scenarios w/dischARGE

- **Andy Collison (ESA)** addressed the following questions from attendees:
 - Veronica Cuevas (LARWQCB) asked if they could model what will happen when VA WRP takes in flows from the Newhall Ranch development. Ray Tremblay (LACSD) clarified that VA WRP would only be taking about 0.25 MGD from the Newhall Ranch development which would most likely be offset by overall decreasing flows at VA WRP due to water conservation. Collison agreed that the Newhall Ranch development wastewater flows wouldn't have much effect on Santa Clara River (SCR) river temperatures. Cuevas then asked if they could model how things would be different if Newhall Ranch WRP was built. Collison said they could look into that in the future if needed (note: Newhall Ranch WRP is not yet built and is not anticipated to be built for several years; the proposed discharge location is much further downstream near the LA-Ventura County line; and although not mentioned during the meeting, a temperature evaluation was performed and submitted to the LARWQCB for the proposed Newhall Ranch WRP and demonstrated that the proposed plant effluent would not raise the receiving water temperature above 80°F, mainly due to the comparatively low proposed Newhall Ranch WRP effluent flows in comparison to the larger SCR flow upstream and at the proposed point of discharge).
 - Steven Webb (LARWQCB) asked if the model takes into account river channel characteristics, such as shallower sides versus the deeper mid-channel; Collison said it does but that the river is so dynamic, model results represent only a snapshot in time.
 - Rosi Dagit (RCDSMM) asked whether the temperature probes would remain in the river until the first rain (around November). Collison confirmed that they will.
- **Cassidy Cooper (UC Davis)** discussed the fish laboratory studies on the partially armored threespine stickleback (PATs) surrogate. Cooper reviewed the results from Phase 1 of the fish study, previously presented to the TAC in December 2024. Cooper then described Phase 2 of the fish studies which will seek to determine the effects of 1) thermal cycling on thermal tolerance and 2) temperature on male parental care behavior and sensitive life stages such as embryos and juveniles. Cooper discussed Phase 2 fish collection efforts where UCD placed continuous temperature probes where the fish were collected; daily maxima from March through mid-July was between 70°F to 83°F. UCD conducted the cycling experiments with temperatures cycling between 73°F -83°F and two control groups with constant temperatures at 78°F and 80°F. They found that the fish had increased survival overall (about 50% increase in survival compared to constant temperatures) but did not gain additional thermal tolerance from cycling temperatures. For the sensitive life stage experiments, UCD has collected gravid females and juveniles and has begun the acclimation process; these experiments are expected to be completed later in 2025.
- **Cassidy Cooper (UC Davis)** addressed the following questions from attendees:
 - Stefani Daryanto (LARWQCB) asked if the temperatures used in the cycling experiments (73°F -83°F) were close to the natural temperatures of the SCR; Cooper confirmed that they are based on ESA's river monitoring results.
 - Veronica Cuevas (LARWQCB) asked if there were any refugia in the experimental tank; there were none. She also asked if the fish exhibited any unusual behaviors before they died. Cooper said they tend to retreat to the bottom of their tank and lose equilibrium but that UCD did not quantify those behaviors for this experiment. Cuevas also asked whether the males would have access to sediment and other natural materials during the male parental behavior experiments; Cooper said they will.
- **Joel Mulder (ESA)** covered the recent benthic macroinvertebrate (BMI) sampling effort which took place in mid-June up- and downstream from SA and VA WRPs. The ESA team had to stop sampling at three locations near the SA WRP because they encountered

stickleback, including in the outfall channel from the Saugus WRP. Mulder clarified that they do not know what type of stickleback were encountered; they may have been UTS (endangered and protected) or PATS or hybrids (both not endangered nor protected). ESA did not encounter stickleback around VA WRP and successfully collected BMI samples at all planned locations. ESA deployed temperature probes where stickleback were found, and the temperatures began to exceed 80°F daily in mid-July. ESA and LACSD went back to the SCR two additional times in late June and late July 2025 and encountered more stickleback. The SCR flows dried out/disappeared upstream of SA WRP in early July and the team discovered several stickleback mortalities. It appears that the presence of upstream flow allowed stickleback to navigate to this area but its still unclear exactly from where the stickleback originated (e.g., Bouquet Creek or mainstem of the SCR).

- **Joel Mulder (ESA)** addressed the following questions from attendees:
 - Veronica Cuevas (LARWQCB) asked if ESA has seen any difference in BMI from past years. Mulder clarified that they don't have the BMI data back yet. Roswell further clarified that it may be difficult to compare datasets because LACSD has not been permitted to sample up- and downstream of VA WRP for about 10 years and this summer's BMI sampling efforts by SA WRP were unsuccessful due to stickleback encounters.
- **Eric Stein (SCCWRP)** asked if there were any additional comments or questions on the studies; there were no additional questions (beyond those listed above) or comments mentioned by the TAC. He also provided a link to the SCR temperature compliance project website hosted by SCCWRP (<https://www.sccwrp.org/la-rivers-temperature-effects-study/santa-clara>). Marjanovic discussed next steps and stated that the next TAC meeting would most likely be in early 2026 and would cover the study results.