



**San Francisco Public Utilities Commission
Citizens' Advisory Committee
Water Subcommittee**

MEETING MINUTES

**Tuesday, March 24, 2026
5:30 p.m. – 7:00 p.m.
525 Golden Gate Ave., 3rd Floor Tuolumne Conference Room**

Members of the public may observe and participate via Zoom virtual conference software.

Zoom meeting recording:

<https://sfwater.zoom.us/rec/share/Cu0UBd1da8a3dHeFfg4xwQ1vAFJcjfLkQMdLt7Vzil7GWULnBmCrEflU26p9zs5s.UQwlynp04ChdCNcQ>

Meeting Passcode:
423095

Mission: The Water Subcommittee reviews water supply system reliability, water conservation, recycling, regional cooperation efforts, and other relevant plans and policies.
([Admin Code 5.140-142](#))

[min. Code Article XV, Sections 5.140 - 5.142](#).

Members:

Jennifer Clary (Chair) (D11) Douglas Jacuzzi (D4) Thomas Smegal (M-Reg'l Water Customers)
Aaron Hebert (D9)

D = District Supervisor appointed, M = Mayoral appointed, B = Board President appointed

Staff Liaisons: Lexus Moncrease and Lupita Garcia
Staff Email for Public Comment: cac@sfwater.org

ORDER OF BUSINESS

1. Call to order and roll call at 5:31 pm

Present (3): Clary, Jacuzzi, Hebert

Absent (1): Smegal

Presenters/Staff: William Sears

Members of the Public: Thomas Francis, Peter Drekmeier, Danielle McPherson, Walter.

2. Approve [February 24, 2026, Meeting Minutes](#)

A motion was made (Hebert) and seconded (Jacuzzi) to approve the February 24, 2026, Meeting minutes.

The minutes were approved without objection.

Public Comment: None.

Daniel Lurie
Mayor

Joshua Arce
President

Stephen E. Leveroni
Vice President

Avni Jamdar
Commissioner

Kate H. Stacy
Commissioner

Meghan Thurlow
Commissioner

Dennis J. Herrera
General Manager



3. Report from the Chair

- Chair welcomes committee members, staff, and the public

Public Comment: None.

4. Public Comment: Members of the public may address the Committee on matters that are within the Committee's jurisdiction and are not on today's agenda (2 minutes per speaker)

Public Comment:

- **Peter Dreke** commented the draft Urban Water Management Plan (UWMP) came out last week and he thinks it is a well written document, and his concern is it contains bias against the Bay Delta Plan supporting the narrative that gives the SFPUC reason to oppose the Bay Delta Plan without validity. The population of San Francisco is projected to grow 5 times faster in the coming decades than in the past. They are getting better in demand projection and for the regional water system in 2020, it was projected for 2045 to be 244 million gallons per day (MGD) and now the projection for 2050 is 215 MGD. It is moving in the right direction, and the CAC had a wonderful presentation from Mark Shahinian last month where he produced a drought model that takes into consideration the impact of drought that's lacking in most water agencies. For UWMP, you are supposed to look at the driest 5-year sequence and the goal is to make sure you have enough water for a severe drought along with what is planned for development. For the SFPUC, we can use the years 1987-91 and don't need to do any rationing or alternative water supply and we still have enough water for another year. The SFPUC takes their whole design drought and takes 5/8ths of it. 1976-77 was the driest two years on record and in the Bay Delta Plan with dry years like it, the SFPUC would need to give water out of storage. The design drought produces less water in 8 and ½ years than the drought on record in 6 years. What would happen If the SFPUC pursued its 5 dry year sequence and do the rationing, at the end of the 5 years, they would have over 608,000-acre feet of storage, enough to last two and half years. Simply by amending the design drought, we can easily manage the Bay Delta plan without running out of water and being in better shape than any other water agency. It would be wonderful if the CAC weighed in to ask the SFPUC to look at the alternative.

5. Presentation and Discussion: Tuolumne River Restoration Project, William Sears, Water Operations Analyst, SFPUC

Presentation:

- Tuolumne Healthy Rivers & Landscapes Program Early Implementation Status
- Tuolumne HRL non-flow commitments & Early implementation
- Tuolumne HRL habitat commitments
- Tuolumne HRL current efforts
- Why restore spawning habitat when it's not a limiting factor for salmon?
- How are the temperatures for holding and spawning?
- Monitoring
- Redd survey preliminary results
- New La Grange juvenile RST monitoring preliminary results

Discussion

- **Chair Clary** asked where this plant is located.

Staff Sears responded right next to the old La Grange bridge project on the upper river.

- **Member Herbert** asked from a species perspective, what are the objectives of the project.

Staff Sears responded the Healthy Rivers and Landscapes (HRL) as a whole is focused entirely on fall-run chinook salmon so that is the target of the proposed measures for all parties in the Central Valley including the Tuolumne. Habitat projects that support spawning have been the focus and interest of the parties. The SFPUC building the old La Grange spawning project unintentionally benefited spring-run chinook salmon and created the opportunity for spring-run salmon to spawn near La Grange Dam and there was previously little spawning habitat. The projects overall are meant and will benefit multiple species.

- **Member Hebert** commented earlier the difference between early implementation and waiting for approval for program implementation was explained and the chart shows riffle A2 and A3 as planned and asked if these are planned to do this year and asked to clarify.

Staff Sears responded design criteria was developed during the process of negotiating the HRL with the State Waterboard staff. State Waterboard staff wanted to come up with consistent design criteria for the habitat projects which means different depths and velocities that are suitable for most salmon and trout. Once they developed those, the distinguishing factor is there is a process for projects that are already in implementation before they developed the design criteria since no one knew what the design criteria would be before January 1st. After January 1st, the design criteria could be integrated, and this is important for the accounting part of the HRL because restoration have been done for a while and the HRL have been in negotiation for at least a decade, so a lot of parties wanted to make sure there was a path to include these projects for compliance.

Member Hebert asked if the bottom 3 projects are waiting on conditional approval or agreement around the Bay Delta Plan or if they are intended to be undertaken.

Staff Sears responded they are not waiting on approval from the State Waterboard. One project is waiting to purchase agricultural land on the lower Tuolumne River and the other two, there is no bandwidth to approach. These are on the radar of our river partners.

- **Member Hebert** asked given the importance of water temperatures for spring-run if gravel augmentation is measured and is this is thought about by the SFPUC.

Staff Sears responded no, and this is an interesting point. Generally, where the SFPUC has done habitat work has suitable temperatures and there has not been a need to do it. Further downstream there has been gravel work since temperatures warm up and there is gravel work done. He will present this idea to the project team.

- **Member Jacuzzi** commented that the before and after slide looks fantastic and commented it is relatively small landscape restoration and asked what overall percentages is perceived to be degraded and needs to be restored with this type of gravel.

Staff Sears asked if the question is asking overall how much of the river needs restoration.

Member Chair asked pre-gold rush what percentage that would cover what we just restored.

Staff Sears responded it is a great question and he unsure we know since there has not been a historical ecology study done in the lower Tuolumne River, like San Francisco has done these studies on the peninsula and Alameda Watershed. What we do know is above Don Pedro Dam and under it, there was a lot of spawning gravel for fall run since it is relatively flat. It is also the transition between the upper Tuolumne River which is quiet steep and the lower Tuolumne which is relatively flat. The range above and below this area is the transition area and there would be a lot of spawning areas historically previous to the dams. This project is focused on post-dam conditions and making it more suitable for salmon and putting gravel in as many places that make sense and so are other parties. One important caveat is when we were designing this project, we were aware there has been some spring run coming in occasionally, but it wasn't a lot and in talking to National Fishery service, it would be good to keep some holding areas in these areas for spring run specifically. Purposefully this design left pools and tried to incorporate it, so the juveniles have a place once they come out of the gravels.

- **Member Hebert** commented high flows in the past have mobilized gravel out of the area and asked what the return interval on the flow events is and how often augmentation might happen.

Staff Sears responded it is a great question and one he asked early on when they started designing this project. In the past this area has been subject to high flows due to spills from Don Pedro Reservoir and that it is entirely hydrologically driven and it is difficult to control due to the reservoir being large and the Tuolumne River being a large watershed that is highly productive in terms of water. One of the things that was done when designing this project was to run it through a modeling analysis to simulate some of the largest water years we have seen on record which happen around once every three years and see how the project performs. One of the changes done after running it through the analysis was to tweak the flows to move around the gravel in certain areas so there will be deeper channels to expect some sinuosity to happen.

- **Member Clary** asked if the SFPUC is not dumping a lot of water right now.

Staff Sears responded San Francisco does not control the releases below Don Pedro Reservoir but the districts have been releasing more water than their base flows up to 3,000 cubic feet per second (CFS) because they are encroaching their flood control curve for reservoir management and it is great timing for juvenile salmon in the river.

- **Chair Clary** asked under the HRL what the commitment for flows are.

Staff Sears responded this unfortunately is a whole other presentation, but some highlights are in general the base flows are higher in the late winter and spring time frame (February – June) and the current license that the district has which is a Federal Energy Regulatory Commission (FERC) license has certain requirements from 50 years ago so the new license proposed and the HRL have higher flows in this period.

Chair Clary asked if this does not include the 40% the State Waterboard had originally set aside.

Staff Sears responded yes, but the flows do often get into this range in the wetter years so in general the idea behind increased flows is to target specific needs and life stages for fall run chinook salmon.

- **Chair Clary** asked if the February through June increase in flows happen in dry years as well.

Staff Sears responded yes but he is not the expert on the flow regime but two of the big pieces of the flow proposal is flood plain pulse flow that would happen in February/March timeframe to get juvenile fish to get to the flood plains and rear there, so they get bigger and hopefully survive. Combined with this is a larger spring pulse flow which exists in the districts' current FERC license, and these have greater volumes. The spring push flows are meant to push the juveniles and give them a safer path down stream and out of the Tuolumne.

- **Chair Clary** asked what the goals for salmon restoration and what metrics are being used.

Staff Sears responded there is a doubling goal that has been set for all the tributaries in the Central Valley for fall run and the doubling goal for the Tuolumne is 38,000 fall run adults. There is now even existing spawning habitat for those adults, and it is increasing with the projects. There is some limitation on rearing habitat depending the water year type so if it's wetter more flooding planes are available.

Chair Clary commented we have had 3 good years and asked where we are right now.

Staff Sears responded this year was 3,800 fish on the lower river for fall-run and there is a lot of factors to consider such as the Tuolumne is a spawning and rearing location and there are challenges with survival in the lower Tuolumne, and this is what the HRL and habitat projects are aimed at. There is significant mortality in the San Joaquin and Bay Delta for juveniles and once they reach the ocean, there is nothing we can do other than control the commercial harvest. Another factor is the State manages the hatchery system for fall-run and there are a few Federal hatcheries specifically for commercial purposes and this system is not compatible with recreating viable natural populations of fall run in the Central Valley and this is because the level of genetic management and releasing fish away from the hatcheries and stray to places where are natural populations where hybridizing occurs and eventually natural populations become homogeneous with the hatchery fish because they get swamped genetically.

- **Chair Clary** asked if the \$82 million dollar commitment is the shared commitment amongst the 3 groups that have diversion rights on the river.

Staff Sears responded it is shared and split evenly amongst the three parties.

- **Chair Clary** asked if the limited area of the restoration is driven by higher temperatures.

Staff Sears responded yes partially, and the other part is the way the Tuolumne River works is the upper half of the Lower Tuolumne is gravel bedded and the low half of the Lower Tuolumne is and banded and can't create spawning habitat and rearing habitat can happen anywhere in the river. We have been focused on middle and upper half primarily to allow flexibility on temperature in multiple different water years, and it is easy to work in the upper river due to access and can incorporate the lands into restoration actions.

- **Chair Clary** asked what a riffle is.

Staff Sears responded it is a pile of gravel on the river.

- **Chair Clary** commented in listening the presentation, it sounds like the gravel replenishment sounds more like a maintenance project rather than a restoration project because it will need to continue to happen over time and asked is it funded through the operations budget or capital planning budget.

Staff Sears responded this is a great question for Ellen Levin.

- **Chair Clary** asked how much was spent of the \$82 million.

Staff Sears responded he does not know specifically and the Old La Grange Bridge Project was a \$7 million dollar project and San Francisco paid a 1/3 of that. Powerhouse Riffle project which is up next is going to have a similar price tag so this will be a 2026 expenditure, and the timing is unknown for the 77 acres but will be within \$82 million.

- **Chair Clary** asked if this is as much land that could be identified within that stretch of the river.

Staff Sears responded yes, and this is the maximum commitment but does not need to be maximum restored acreage and may restore much more but it depends on what we can acquire.

- **Chair Clary** asked what the proposed timeline is for SFPUC to reach its goal.

Staff Sears responded for the Tuolumne; the big picture is the projects in the HRL need to come online within the 8-year timeframe described. The realistic picture to understand how the effects of the HRL are playing out for fall run and other species, we are trying to get these projects online as soon as possible to see the effects on multiple generations of salmon since they have a 2-to-5-year life cycle. We are trying to frontload these projects so we can be in an implemented phase as far as the habitat projects go.

- **Chair Clary** asked if the limiting factor was land acquisition or money.

Staff Sears responded it is not money; it is availability of land to purchase. We settled on the efficient of doing one or two areas that was larger with the money available since the cost of labor is going up since the pandemic.

- **Chair Clary** asked if land is getting cheaper.

Staff Sears responded it is interesting because of the softening of the Almond market and so the negotiating market is a bit better.

- **Chair Clary** asked if California Department of Water Resources (DWR) do a study on SFPUC's watershed to try to understand how to release more water.

Staff Sears responded he does not know this specifically because not an operator. What he does know the irrigation districts and San Francisco utilize a ferro approach and are always looking 10 days out.

- **Chair Clary** commented this year is a good example of what we can expect in a warmer climate such as losing the snowpack early and something to think about is releasing water now for outmigration and capturing it down stream for groundwater recharge and could be a way to allow for additional flows and recapture.

- **Staff Sears** responded the HRL the district and San Francisco put forward include infiltration galleries one of which is already installed halfway down the lower river. One of the features of the HRL is to release higher flows downstream of La Grange and recapture those at the infiltration gallery supporting cooler temperatures at the upper portion of the river.

Chair Clary further commented that it also allows for cooler flows in the fall. There was a study on the Merced capturing and recharging groundwater in the river and increased fall flows.

Staff Sears commented the Tuolumne does gain some water naturally because of the Turlock and Modesto reservoirs and is not familiar with the groundwater set up.

- **Member Hebert** asked to clarify the comment spawning not being a limiting factor for fall run but also doing gravel augmentation projects to benefit spawning and it sounds like accessing flood plans and growing juvenile is a limiting factor and would like to understand the strategy to pump up spawning to get more juveniles.

Staff Sears responded we do want to put spawning habitat where water is cool for both spring and fall run and want to have the conveyor belt of gravel be intact because a wetter year will happen and gravel will move downstream and be replenished. The sites will need to be maintained. The idea generally is to provide lots of spawning opportunity and in areas where conditions are good for spawning and provide the flows for them to survive their trip out. The idea is to produce as many juveniles as possible and have an idea that if fall-run populations increase as we hope to do we will be able to accommodate the spawners and the juveniles they produce. Slamon can be under natural conditions, extremely productive about 5,800 eggs per female and about 30% will survive the egg stage.

Public Comment:

- **Tom Francis**, Water Resources Manager at Bay Area Water Supply and Conservation Agency (BAWSCA), commented BAWSCA is supportive of the early implementation of the HRL projects and a good part of the 1/3 of the \$82 million would be coming from SFPUC's wholesale customers. In his role he gets to go and meet quarterly with Staff Spears and others doing work in the Tuolumne and hearing what was shared was helpful and asked since it is Spring 2026, when would the spring run start showing up.
- **Staff Sears** responded staff are on the lookout to see when they will start showing up and last time they were spotted around April 1st through May and had a counting weir up installed and saw 54 adults spring run come in June.
- **Peter Drekmeier** commented he appreciated the presentation, and the projects are all important but do not substitute for flow. We need both. The Scientific basis report was clear the limiting factor were water temperature, flood plain rearing habitat and outmigration flows which are all flow dependent. The Irrigation Districts and Fishery Agencies did an admirable job in rescuing the spring run and keeping them alive. Over the summer they released slightly higher flows from La Grange that kept the water cool enough for 2-3 miles and then it got warmer. Those fish historically would have gone all the way to Yosemite where there are deep cool pools, and we are trying to create a suitable environment in the lower Tuolumne. They were attracted the lower Tuolumne because of the outmigration pulse flow for the juvenile fall run and were coming up the San Joaquin and were imprinted to go up higher but there is a nice flow of colder, cleaner water coming down the Tuolumne, so the flow and temperature was important. Great job on the spawning habitat and the question is what happens to

the baby fish, are they getting eaten by bass, if they have flood plain habitats, they have more food and can grow twice as big for out-migration to increase their chances of getting out. Inundation and timing is important. He appreciates the rotary flow trap which gives another point of data and there are two others for counting down stream and what they can do is count the fish passing through Waterford and count how many go to Grayson and count the mortality rate. In the high-water years there is more survival chances. To him, we can provide the water without a problem and has presented diversion vs unimpaired flows graph. What happens when we have dry years, water agencies and the irrigation districts hoard water and then end up having to spill it. The drought in 20-teen years there were 5 years that were low water years and on average 12% unimported flows made it down the river and were terrible years for the fish. In 2017 we had a big water year, and the unimpaired flow was 97% and the biggest driver for people to conserve water is they want to help the environment, but conservation didn't help because the water was held behind dams to get released in one year. There was a one-week period where they exceeded the flood control limit of 9000 CFS they were up to 15,000 CFS and all the water we conserved during the water we conserved in the 5 years was threatening flooding in Modesto versus providing environmental benefits. Had the Bay Delta been in place, we would have had 40% of unimpaired flows and in 2017, there would have been 44% so they would still need to spill but not all in one year. The additional flows are key and does not believe HRL will not work without higher flows. He saw the graph of the spawning of spring and fall-run salmon and there is a week gap which is good news and asked if there has been any information on super imposition like did the fall-run come in and disturb the spring run salmon.

- **Staff Sears** responded they did massively, and this was expected. The good news is they didn't hybridize but the expected bad news is they did superimpose. One thing that is emerging from recent literature is that even though we expect a lot of egg mortality it may not happen as much because the eggs may get dislodged but then get relogged downstream. From the productivity that we've seen from the rotary screw trap we might see the superimposition didn't affect productivity.

6. Future Agenda Items and Resolutions

Standing Subjects

- Groundwater
- Water Quality

Specific Subjects

- Resolution on Salmon Restoration Project – Adopted May 19, 2026
- Integrating Tribal Leaders into SFPUC Land Management Decisions
- State Board Water Rights
- Water Enterprise Environmental Stewardship Policy Implementation Report
- State of the Regional Water System Report – Bi-annual report
- Drought resilience: 3-year water supply update
- Water Equity and Homelessness
- Water Treatment Plant Tour
- Sunol Watershed Tour
- Capital Plan Update

Adopted Resolutions for Follow Up

- Resolution on Salmon Restoration Project - Pending
- Resolution in Support of a Resilient Water Supply [adopted August 17, 2021](#)
- Resolution in Support of the Southern Skyline Boulevard Ridge Trail Extension Project [adopted April 20, 2021](#)

- Resolution in Support of Interim Emergency Rate Assistance Program and Revised Community Assistance Program [adopted July 21, 2020](#)
- Resolution in Support of Improved Communications Related to the San Francisco Groundwater Supply Project [adopted August 21, 2018](#)
- Resolution in Supporting Stewardship and Public Access in the Redeveloped Lake Merced West Property [adopted in March 15, 2016](#)
- Resolution on Impacts of Drought on System Maintenance and Improvements [adopted January 19, 2016](#)

Public Comment: None.

7. Announcements/Comments Visit sfpuc.gov/cac for final confirmation of the next meeting date.

Public Comment: None.

8. Adjournment at 6:57 pm

For more information concerning the agendas, minutes, and meeting information, please visit sfpuc.gov/cac. For more information concerning the CAC, please contact by email at cac@sfgwater.org or by calling (415) 517-8465.

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ACCESO A IDIOMAS

De acuerdo con la Ordenanza de Acceso a Idiomas "Language Access Ordinance" (Capítulo 91 del Código Administrativo de San Francisco "Chapter 91 of the San Francisco Administrative Code")

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