



December 15, 2021

Turlock Subbasin GSP Comments
c/o Turlock Irrigation District
PO Box 949
Turlock, CA 95381-0949
Via Email

Re: Comments on the Turlock Subbasin Groundwater Sustainability Plan (GSP).

To Whom It May Concern:

The Tuolumne River Trust (TRT) and the California Sportfishing Protection Alliance (CSPA) write to comment on the Turlock Subbasin Groundwater Sustainability Plan (GSP). Overall, TRT and CSPA appreciate the attention and detail that has gone into the development of the GSP. We also commend the Turlock Subbasin GSAs for conducting an open and transparent process with many opportunities for public engagement. We support Scenario 5 (the Sustainable Scenario) which incorporates both groundwater projects and management actions, including demand reduction.

TRT and CSPA believe there is room for improvement in setting more ambitious goals to achieve groundwater sustainability. We encourage the Turlock Subbasin GSAs to aim to exceed baseline conditions established on January 1, 2015, which was several years into an extended drought that led to overreliance on groundwater and depleted groundwater reserves. Accordingly, we believe the GSP would benefit from including more details on the Group 3 Projects.

To help fund a more ambitious plan, we propose that the Turlock Subbasin GSAs engage with the San Francisco Public Utilities Commission (SFPUC) to explore opportunities for collaboration on infrastructure improvements, water use efficiency, and groundwater banking. We believe the SFPUC would be very interested in helping to fund projects in the Turlock Subbasin in exchange for water credits or a water insurance policy to be used in the case of drought.

The SFPUC uses an extremely conservative drought planning scenario that couples the drought of record (1987-92) with the driest two-year period on record (1976/77) to create a manufactured 8.5-year design drought. This is in spite of the fact that the SFPUC's recent Long-Term Vulnerability Assessment suggests that the likelihood of occurrence of the design drought is extremely low.

In recent years, the SFPUC and its wholesale customers have reduced overall demand dramatically. Rationing and alternative supplies allow them to stretch their water supply even further. The SFPUC's 10-Year Financial Plan projects that water sales will remain flat for at least the next decade, largely due to hefty rate increases on the horizon that will encourage greater efficiency. Nonetheless, despite its enviable position, the SFPUC is seeking greater assurance that it won't run out of water.

Establishing a Groundwater Water Bank

The SFPUC could help fund the in-lieu and direct groundwater recharge projects identified in the GSP. To incentivize the SFPUC's participation in groundwater recharge projects, a groundwater water bank could be established to operate in a similar fashion to the Don Pedro Water Bank. The SFPUC would essentially pre-pay water for use by parties in the Turlock Subbasin (especially in dry years), and be allowed to redeem banked credits at Hetch Hetchy by diverting additional water there during droughts. Similar to the Don Pedro Water Bank, no water from the Turlock Subbasin would be directly transported to the San Francisco Bay Area. Water users in the Turlock Subbasin would instead rely on groundwater already banked by the SFPUC, while the SFPUC could divert a defined amount of water at Hetch Hetchy above its normal allocation as a junior diverter.

Water Use Efficiency

The potential for water use efficiency in the Turlock Subbasin is tremendous. For example, after the South San Joaquin Irrigation District (SSJID) initiated a pilot project to automate and pressurize an irrigation system, water and energy use decreased by 30% and crop yield increased by 30%.¹ However, funding is needed to improve on-farm infrastructure to achieve greater water use efficiency, and could be secured through an agreement with the SFPUC.

Furthermore, the Turlock Subbasin GSP identifies the City of Modesto's Advanced Metering Infrastructure (AMI) Project. We would like to see similar projects adopted by the Cities of Turlock and Ceres. Turlock is projected to receive 20 thousand acre feet from the Regional Surface Water Supply Project. With a population of 73,000, this suggests gross per capita demand of 245 gallons per day, well above the state average. Similarly, Ceres, with a population of 48,000 and a demand of 10 thousand acre feet, appears to have a gross per capita demand of 185 gallons per day, again quite high. AMI programs would go a long way to promoting water use efficiency.

¹ Stantec (2015). "South San Joaquin Irrigation District Water Delivery System Recognized with Grand Award for Engineering Excellence" – <https://www.stantec.com/en/projects/united-states-projects/s/south-san-joaquin-irrigation-district-division-9-irrigation-enhancement>

Floodplain Inundation / Groundwater Recharge

We support the following recommendation from the National Marine Fisheries Service (NMFS) that the Turlock Subbasin GSP explore the possibility of recharging groundwater through floodplain inundation:

NMFS recommendation for future Projects and Management Actions: We suspect that groundwater recharge projects are likely to be an important action implemented as part of the effort to achieve groundwater sustainability in the Turlock subbasin. NMFS encourages the GSA to consider implementing recharge projects that facilitate floodplain inundation, offering multiple benefits including downstream flood attenuation, groundwater recharge, and ecosystem restoration. Managed floodplain inundation can recharge floodplain aquifers, which in turn slowly release stored water back to the stream during summer months. These projects also reconnect the stream channel with floodplain habitat, which can benefit juvenile salmon and steelhead by creating off-channel habitat characterized by slow water velocities, ample cover in the form of submerged vegetation, and high food availability. As an added bonus, these types of multi-benefit projects likely have more diverse grant funding streams that can lower their cost as compared to traditional off-channel recharge projects. NMFS stands ready to work with any GSA interested in designing and implementing floodplain recharge projects.²

Thank you for the opportunity to comment on the GSP for the Turlock Subbasin.

Sincerely,



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² NOAA's National Marine Fisheries Service Comments on the Developing Groundwater Sustainability Plan for the Turlock Subbasin, September 29, 2021.