



STAFF REPORT

Meeting Type: Planning Committee/Board of Directors

Title: Water Treatment Master Plan Update

From: Alex Anaya, Director of Engineering

Through: Ben Horenstein, General Manager

Meeting Date: January 27, 2026




TYPE OF ITEM: Approve X Review and Comment

RECOMMENDATION: Review and comment on the proposed Water Treatment Master Plan Update

SUMMARY: The District constructed its two main water treatment plants, Bon Tempe Treatment Plant (BTP) and San Geronimo Treatment Plant (SGTP), between 1958 and 1963. Since then, building codes and drinking water regulations have changed significantly, including the adoption of the Safe Drinking Water Act in 1974. A comprehensive evaluation was performed of both treatment plants in 2014, and the District's current San Geronimo and Bon Tempe Water Treatment Plants Master Plan Report (Report) was published in 2015. As a result of the findings, staff recommended specific projects to address various treatment plant needs.

The Report noted the District meets all existing and foreseeable water quality standards. While it did note the presence of taste and odor (T&O) issues, it did not provide recommendations for a new disinfection process. While staff cannot predict the nature of what is going to happen with respect to more frequent dry weather and droughts, increased T&O issues, and potential increased algal blooms resulting from global warming, it would be prudent to revisit the Report's findings and re-evaluate the potential of moving to ozone treatment. The 2015 Report made assumptions that the BTP would be the District's emergency plant due to its ability to deliver water to the southern part of the distribution system via gravity. However, following the 2017 Tubbs Fire in Santa Rosa and PG&E PSPS notifications, the District installed a permanent 3 megawatt (MW) generator system at the San Geronimo, and the larger water treatment capacity of San Geronimo, compared to Bon Tempe, has effectively changed the District's emergency water treatment plant from Bon Tempe to San Geronimo.

The District also experienced a historic drought since the Report was published in 2015. As a result of the drought the District completed the Strategic Water Supply Assessment, and some of the proposed projects involve relying more heavily on Kent, Soulajule, and Nicasio Reservoirs, increasing the criticality that the SGTP be able to function in both planned and unplanned scenarios. Increased water quality concerns, a desire for increased water supply resiliency, and a need to prioritize treatment

plant projects within the larger Capital Improvement Program have led staff to initiate an update to the outdated 2015 Water Treatment Master Plan.

A Request for Proposals was issued for the Water Treatment and Transmission System Master Plan Update in late October 2025, with proposals due January 29, 2026. Staff will review all proposals and interview selected candidates, as needed. Staff will return to a future regularly scheduled Board of Director's meeting with a recommendation on next steps.

DISCUSSION: The District constructed its two main treatment plants, Bon Tempe Treatment Plant (BTTP) and San Geronimo Treatment Plant (SGTP), between 1958 and 1963. Since then, building codes and drinking water regulations have changed significantly, including the adoption of the Safe Drinking Water Act in 1974. Various upgrades and process changes have taken place since initial construction, and while the existing plant capacities are adequate under normal operating conditions, both plants require rehabilitation to assure their continued service into the future and to meet demand under non-routine conditions such as power outages or following a major earthquake. A comprehensive evaluation was performed of both water treatment plants in 2014, and the District's existing San Geronimo and Bon Tempe Water Treatment Plants Master Plan Report (Report) was published in 2015.

The primary drivers of the Report were to evaluate the plants' aging infrastructure reliability, seismic resiliency, operational reliability, and water quality all under the assumption that the BTTP would serve as the District's emergency water treatment plant. A facilities evaluation looked at the two water treatment plants and provided structural, architectural, mechanical, power supply, and instrumentation & control recommendations. As a result of these evaluations, staff recommended specific projects to address the respective plants' vulnerabilities. Some of the identified projects from the 2015 report, such as the filter rehabilitation and mechanical and electrical upgrades at both Bon Tempe and San Geronimo, have been completed, while others, such as the installation of new clarifiers at San Geronimo, have not.

Additionally, while the Report noted that the District meets all existing and foreseeable water quality standards, it did note the presence of taste and odor (T&O) issues but did not provide recommendations for a new disinfection process. Considering global warming and climate change into the future, the District can expect to see more frequent dry weather and droughts, T&O events, algal blooms, and potential increased regulation around harmful algal blooms. While staff cannot predict the nature of what is going to happen, this forecast shows it prudent to revisit the Report's findings and re-evaluate the potential of moving to ozone treatment. Moving to ozone treatment would not only provide a mechanism for the District to reduce T&O issues and the effects of harmful algal blooms but would also drastically reduce disinfection by-products throughout the system. Pursuing ozone treatment would require new changes to the treatment system, which was not included in the 2015 Report. If ozone is installed, the hydraulic grade line of the water would need to be evaluated. This would need to be conducted comprehensively, as there is the potential to lose the ability to pump from Tocaloma since new clarifiers would be needed at a higher elevation than the existing ones.

To further support the Water Treatment Master Plan Update, it is important to note that treatment plant projects outside of the Report's recommendations have been completed since 2015. Most notably, a 3 MW generator was installed at San Geronimo Treatment Plant and completed in 2023. Following the 2017 Tubbs Fire in Santa Rosa and PG&E's notice of Public Safety Power Shutoffs (PSPS) to its customers in California, the District took measures to first rent a 2MW generator system in 2018

for the SGTP ensuring uninterrupted water production while the District completed construction of its permanent 3MW generator system. The District now has operational reliability and resiliency at the SGTP and can continue to keep the treatment plant in operation and allow the North Marin Line Boosters to continue to pump water into the distribution system. The original 2015 Report assumed that the BTTP would function as the District's emergency plant due to its ability to deliver water to the southern part of the distribution system via gravity. However, with the generators now installed at the SGTP and with its larger production capacity when compared to the BTTP, the District has effectively changed its emergency plant from Bon Tempe to San Geronimo.

The District also experienced a historic drought since the Report was published in 2015. Since then, staff completed the Strategic Water Supply Assessment and recommended several projects to increase the District's water supply resiliency. Some of the proposed projects involve relying more heavily on Kent, Soulajule, and Nicasio Reservoirs, increasing the criticality that San Geronimo be able to function in both planned and unplanned scenarios.

Increased water quality concerns resulting from a changing climate, a desire for increased water supply resiliency, and a need to prioritize treatment plant projects within the larger Capital Improvement Program have led staff to initiate an update to the 2015 Water Treatment Master Plan. A Request for Proposals was issued for the Water Treatment and Transmission System Master Plan Update in late October 2025, with proposals due January 29, 2026. Staff will review all proposals and interview selected candidates, as needed. Staff will return to a future regularly scheduled Board of Director's meeting with a recommendation on next steps.

ENVIRONMENTAL REVIEW: None

FISCAL IMPACT: Funding for this project has been identified and included in the Capital Improvement Budget (FY 26 and FY 27) under the A1A04 budget category.

ATTACHMENT(S): None