STAFF REPORT

Meeting Type:	Planning Committee/Board of Directors
Title:	San Geronimo Treatment Plant Clearwell Structural Evaluation and Condition Assessment
From:	Alex Anaya, Director of Engineering
Through:	Ben Horenstein, General Manager
Meeting Date:	March 25, 2025

TYPE OF ITEM: Approve X Review and Comment

RECOMMENDATION: Review and comment on proposed contract award for San Geronimo Treatment Plant Clearwell Structural Evaluation & Condition Assessment project

SUMMARY: The District is in the early stages of the San Geronimo Treatment Plant (SGTP) clearwell structural evaluation and condition assessment project which aligns with the Five-Year Strategic Plan to improve the resilience of Marin Water's infrastructure and reduce the District's carbon footprint. The SGTP is the District's largest energy consuming facility, accounting for roughly 25% of the District's annual electricity demands. This evaluation will provide a seismic structural evaluation and feasibility analysis of installing solar panels on top of the existing SGTP clearwells, thereby reducing the energy demand at SGTP by up to 10%.

DISCUSSION: This District is in the early stages of the San Geronimo Treatment Plant (SGTP) Clearwell structural evaluation and condition assessment project which aligns with the Five-Year Strategic Plan to improve the resilience of Marin Water's infrastructure and reduce the District's carbon footprint.

The SGTP is the District's largest energy consuming facility, accounting for roughly 25% of the District's annual electricity demands. The District's renewable energy analysis identified an action to further investigate the feasibility of installing solar panels on top of the existing clearwells in order to reduce the SGTP annual electrical demands. If solar panels were installed on top of the two clearwells, the District is estimated to reduce its PG&E demand at the plant by approximately 10%, equating to an annual savings of roughly $100,000.

The SGTP has two circular partially buried concrete clearwells. Clearwell No. 1 was constructed in 1962 when the treatment plant was first commissioned, and Clearwell No. 2 was constructed in 1995. Clearwell No. 2 is critical to the District's treatment process due to its outer ring configuration whereby the production of chloramines is achieved to satisfy surface water treatment regulation requirements.

Chlormaninated water from Clearwell No. 2 enters Clearwell No. 1 and is then pumped through the North Marin Line into Smith Saddle Tanks and into the distribution system.

In 2024, Potable Divers Inc. entered the clearwells to perform routine inspections and tank cleaning. During these inspections, divers found evidence of standing water from the clearwell roofs infiltrating through cracks, and areas of spalled concrete, some of which was located around the perimeter of the roof and shell connection of Clearwell No. 1. Potable Divers Inc. recommended the District conduct additional structural assessment by a structural engineering firm to evaluate the extent of the damage and develop a repair plan and design.

Staff issued a request for proposals (RFP) to solicit proposals from structural engineering firms to perform a seismic structural evaluation, provide recommendations for repairs for items identified, and to perform a structural feasibility analysis for the installation of solar panels on top of the existing clearwells. Staff reached out to eight consulting firms, and on January 25th conducted a site visit at the treatment plant to discuss the project and answer any questions. All eight consulting firms were present for the site visit. Staff performed a thorough interview and shortlist process which ultimately led to the preferred selection of TJC and Associates, Inc. (TJCAA) to perform the work.

TJCAA is a local firm specializing in structural analysis and condition assessments of concrete water storage structures. TJCAA's related work experience, project management approach, budget and schedule were the leading factors which scored their proposal above the other engineering consultant firms. This contract will allow the District to consult with subject matter experts in structural evaluations and condition assessments to determine useful remaining service life of the clearwells, perform seismic structural evaluations, receive engineered repair details, and determine any structural improvements necessary to install solar panels on top of the existing clearwells.

Staff recommend the Board review and comment on this item, which will be brought to a future regularly scheduled Board meeting for consideration of approval and contract award.

ENVIRONMENTAL REVIEW: Not Applicable.

FISCAL IMPACT: Funding for this contract is identified in the adopted budget for Fiscal Year 2025 and 2026 under the A1A04 Treatment Plant fund center

ATTACHMENT(S): None.