



STAFF REPORT

Meeting Type: Planning Committee/Board of Directors
Title: Capital Improvement Program - Kastania Pump Station Phase 2 Rehabilitation Project (D21027)
From: Alex Anaya, Director of Engineering
Through: Ben Horenstein, General Manager
Meeting Date: October 28, 2025

AA *BH*

TYPE OF ITEM: Approve X Review and Comment

RECOMMENDATION: Review and comment on the Kastania Pump Station Phase 2 Rehabilitation Project

SUMMARY: The Kastania Pump Station Phase 2 Rehabilitation Project will install a new pump and motor at Kastania Pump Station and a new pressure relief valve and discharge tank at Ignacio Pump Station. On November 18th, the District will open construction bids for the project. District Staff will make a recommendation for project approval and contract award at a future regularly scheduled Board meeting.

DISCUSSION: The District supplies water to approximately 191,000 people throughout central and southern Marin County. Approximately 75 percent of the District's water supply comes from seven reservoirs within the Mount Tamalpais Watershed and in west Marin, and about 25 percent of the water supply is imported from the Sonoma County Water Agency (Sonoma Water) via the North Marin Aqueduct.

The Kastania Pump Station, located in Petaluma California, was built by the District in 1977 to increase flow and pressure in the North Marin Aqueduct and to offset the hydraulic impact of increased consumption of imported water by Petaluma and the North Marin Water District.

In 2004, the California Department of Transportation began planning its Marin-Sonoma Narrows US 101 highway-widening project (CalTrans MSN Project), which required the relocation of portions of the North Marin Aqueduct. This led to the development of North Marin Water District's Aqueduct Energy Efficiency Project (AEEP). The AEEP included installation of a new larger pipeline that would bypass the Kastania Pump Station and allow gravity flow to meet current demand. Upon completion of the AEEP in August 2015, the Kastania Pump Station was decommissioned.

In 2020 and 2021, Marin County and much of California faced an exceptional drought, and after two successive dry winters with significantly below average rainfall, District reservoir storage volumes were at historically low levels. In response to the emergency drought conditions in Marin County, the District pursued to rehabilitate and recommission the pump station. This booster pump station along the North Marin Aqueduct provides operational flexibility for the District to meet its imported water supply needs when they cannot be met by gravity flow through the North Marin Aqueduct.

In order to get the pump station in operation as expeditiously as possible, the District pursued rehabilitating and recommissioning the Kastania Pump Station with a two-phase approach. The first phase of the project was completed in 2021 and installed new yard piping to reconnect the Kastania Pump Station back to the North Marin Aqueduct. After piping was installed the District started and recommissioned the pump station.

In August 2023, the District began the design of the second phase of the Kastania Pump Station Phase 2 Rehabilitation Project. The scope of this phase of the project included an extensive rehabilitation of the pump station including the installation of a new electrical motor control center, variable frequency drives, pumps, motors, roof, pump station site drainage improvements and the addition of a new pressure relief valve and tank. The objective of this project was to enhance transmission system reliability.

Occurring simultaneously to the Kastania Pump Station Phase 2 design, the District was evaluating larger water storage and conveyance alternatives, and the Board selected the water conveyance Atmospheric River Capture Project as the preferred water supply alternative and directed staff to advance this project into design and environmental review. During the review of the Atmospheric River Capture Project, staff identified an opportunity to modify the Kastania Pump Station Phase 2 design to avoid investing in a pump station that would not fully serve the proposed Atmospheric River Capture Project in the future.

At the April 22, 2025 Planning Meeting, staff presented a scaled down scope of work of the Kastania Pump Station Phase 2 Project, which would allow the District to operate the first phase of the proposed Atmospheric River Capture Project, without making a costly investment at the Kastania Pump station that could require upsizing and full reconstruction in the future.

The scaled down Kastania Pump Station Phase 2 Project (Project) will install a single, new high efficiency pump and motor and new drainage features at Kastania Pump Station. The project will also install a new 16" pressure relief valve and 8,000 gallon pressure relief discharge tank at Ignacio Treatment Plant.

This Project will enhance transmission system reliability. The proposed project will increase the maximum flow rate from the existing 17.5 million gallons per day (MGD) via gravity up to 24 MGD with the use of the pump station. The District will continue to operate the system within contractual limits pursuant to the recently approved agreement with Sonoma Water, as well as its existing transmission agreement with the North Marin Water District. The Project's selected upgrades with new, modern equipment will increase the operational efficiency at Kastania Pump Station. The installation of the pressure relief valve at Ignacio Treatment Plant will protect both Ignacio Treatment Plant and the North Marin Aqueduct from high pressure surge during unplanned power failure events.

Budget:

Engineer's Estimate:	\$ 2,100,000
Contingency (10%):	\$ 210,000
Materials/Prof. Fees	\$ 587,077
District Labor/Inspection:	\$ 550,000
Total Budget:	\$ 3,447,077
Budget Category:	A1A07

Project Implementation Schedule:

Project Advertisement:	October 14, 2025
Bid Opening:	November 18, 2025
Project Award:	December 9, 2025
Estimated Completion Date:	April 1, 2027
Duration:	478 days

District staff intend to make a recommendation for consideration of project approval and contract award for this item at a future regularly scheduled Board meeting.

ENVIRONMENTAL REVIEW: Consistent with prior environmental analysis of the Kastania Pump Station Rehabilitation Phase 1 Project, the Director of Engineering has found that the Project is Categorically Exempt pursuant to California Environmental Quality Act (CEQA) Guideline Sections 15301, Existing facilities. The project would also qualify for exemption pursuant to CEQA Guidelines 15302(c), Replacement or Reconstruction. The project qualifies for exemptions pursuant to Sections 15301 and 15302 (c) inasmuch as it includes the installing new equipment involving negligible or no expansion of capacity, as even with project enhancements total Sonoma Water usage is generally anticipated to remain consistent within historical and contractual limitations. Furthermore, no exceptions set forth in Section 15300.2 were found to be applicable.

FISCAL IMPACT: The total cost to complete the Kastania Pump Station Phase 2 Rehabilitation Project is estimated at \$3,447,077, inclusive of District Labor, professional fees, materials and contingency.

ATTACHMENT(S):

1. Site Map