



# STAFF REPORT

---

**Meeting Type:** Planning Committee/Board of Directors  
**Title:** Nicasio Spillway Modification Project Update (D25007) and Professional Services Agreement for Related Survey Work  
**From:** Alex Anaya, Director of Engineering  
**Through:** Ben Horenstein, General Manager  
**Meeting Date:** May 27, 2025

---

**TYPE OF ITEM:**                      Approve        X        Review and Comment

**RECOMMENDATION:** Review and comment on the update for the Proposed Nicasio Spillway Modification Project and proposed award of a professional services agreement for boundary survey work in support of the Proposed Nicasio Spillway Modifications Project

**SUMMARY:** Staff will provide an update on the Proposed Nicasio Spillway Modification Project and the work that is underway since the last staff update at the February 13, 2025 Planning Committee meeting, including the need for additional land survey support services to conduct reservoir boundary surveys in connection with the proposed project. During preliminary environmental assessments, it was identified that land survey work would be necessary adjacent to the reservoir and within the community of Nicasio. This work is necessary to identify property boundaries, more accurately evaluate potential inundation effects from the proposed project, establish monuments within the community of Nicasio that tie back to the Seeger Dam crest benchmark, as well as to better inform the upstream hydrological analysis in Nicasio and Halleck Creeks. The level of survey work necessary to complete this task is complicated and lengthy and would overwhelm staffing resources and affect the capital program workflow.

Staff has requested and received a proposal from a qualified land-surveying firm that has experience doing surveys in Marin County. Staff will make a recommendation for award of the professional services agreement for related land surveying work at a future regularly scheduled Board meeting.

**DISCUSSION:** The District has been actively working on the various aspects of the Nicasio Spillway Modification Project, which is one of the near-term projects identified in the Local Storage Improvement Assessment to improve the resilience of the District's system. The District contracted with the engineering firm Black and Veatch (B&V) to perform the engineering analysis and design of the spillway modification component as well as with Environmental Science Associates (ESA) to assist with environmental review, documentation, permitting and stakeholder engagement.

The District evaluated three different spillway modification alternatives and selected the inflatable rubber gate option that provided the least amount of construction risk and cost while providing a higher degree of operational flexibility. Staff worked to develop the preferred alternative to the 30% design level which has allowed the environmental review process to develop in parallel with the design. The 30% design has been completed as of May and will be submitted to the Division of Safety of Dams (DSOD) for review and feedback. Staff is coordinating a 30% follow-up meeting with DSOD in June 2025 to make adjustments as the 60% design moves forward, which will also be submitted for DSOD review.

During early evaluation of the design alternatives, it was determined that there was insufficient geotechnical information to determine the stability of the dam at the proposed increased water surface level. Staff submitted an application to DSOD for review of the proposed geotechnical soil borings that will be required to complete the stability analysis for the spillway modification, which is needed to ensure the dam continues to be structurally sound in compliance with DSOD criteria.

During preliminary environmental assessments, it was determined that localized land survey around Nicasio Reservoir in the community of Nicasio is needed to identify the 18 property boundaries adjacent to the reservoir so they can be identified and visually referenced. This will require the survey firm to pull property title reports, conduct research at Marin County Recorder's Office and Marin historical records library in order to do a property boundary retracement. Monuments will be set in the community of Nicasio that will be surveyed back to the Seeger Dam benchmark, establishing permanent vertical reference monuments that relates the location of Seeger Dam to the community of Nicasio. Once the property boundaries have been resolved and the new monuments are installed, the land surveyor will be required to file a record of survey with the Marin County Surveyor pursuant to Section 8762 of the California Land Surveyor's Act. Once this survey work is complete, the District will be able with greater accuracy to evaluate the proposed project inundation during the design process as well as provide the necessary vertical control to complete the upstream hydrological analysis. Staff requested and received a proposal for the work described above and will bring a recommendation for award of a professional services agreement for this land surveying work to a future regularly scheduled Board meeting.

Staff has been working through the preliminary engineering analysis including hydrologic and hydraulic assessments and yield studies needed to determine the potential storage increase as well as potential upstream and downstream impacts. As a result of these efforts, staff have identified the need to conduct detailed hydrological analysis to the upstream reaches of the reservoir into Nicasio and Halleck Creeks. This additional analysis is required to understand the existing conditions in the area and the potential for inundation of the parcels adjacent to Nicasio Reservoir related to the tributary creek inflows into the reservoir. These tasks will aid in determining the extent of mitigation measures that may be needed. In addition, it will provide information regarding sediment loads that have migrated into the reservoir.

Under the California Environmental Quality Act (CEQA), staff has determined that an environmental impact report (EIR) is required, which is the highest level of CEQA review. Based on this determination, staff has prepared and published a Notice of Preparation, which will start a 96-day public review and comment period that will end August 4, 2025. This process is designed to gather public input and information that will inform the appropriate scope of the environmental review and assist with preparation of the EIR. In addition, the District is conducting a downstream fisheries and hydrological

study as well as biological assessments and mapping wetlands to better understand existing environmental conditions. Staff has actively engaged several stakeholder groups and are in regular communication with resource agencies and interested parties through the Lagunitas Creek Technical Advisory Committee, Nicasio Landowners Association and Nicasio School Board.

Survey Work Budget:

Survey work: \$228,929  
Budget Category: A1A03, A1A16

**ENVIRONMENTAL REVIEW:** As part of the CEQA process and in addition to the EIR scoping meetings scheduled over the summer, the District will continue its work on the project design and environmental review and analysis that will inform the District's preparation of a draft EIR for this proposed project. Upon completion, the District will release a draft EIR for public review and comment. Comments on the draft EIR will be considered and responded to as part of the EIR process. Following this work, a future item will be brought to the Board for consideration of certification of the EIR and project approval. District staff will continue its public engagement and updates throughout this process.

**FISCAL IMPACT:** The total cost to complete this survey work in support of the Proposed Nicasio Spillway Modification Project is estimated at \$228,929, which funding has been identified in the Capital Improvement Program Budget under the A1A03 and A1A16 fund centers.

Task Description	Budget
<b>Boundary Survey:</b> This task will include perform records research and review files from various sources including the County of Marin Public Works, Marin County Recorder's Office, County of Marin historical records library, and Marin Municipal Water District. Calculate potential locations of boundary monuments for investigation by field crews. Perform boundary survey and collect field data in sufficient detail to locate the exterior boundary intersections of the private parcels with the MMWD's Nicasio Reservoir boundary. Locate fence lines, existing property corners and any features indicating lines of possession.	\$166,150
<b>Record of Survey:</b> File Record of Survey, which is required in accordance with Section 8762, of the California Land Surveyor's Act. Prepare a Record of Survey depicting the resolved boundary lines and any monumentation set and file it with the Marin County Surveyor.	\$19,840
<b>Boundary Staking and Monumentation:</b> Set two monument at the exterior boundary lot corners per lot in accordance with the Record of Survey Map. Monuments will consist of 1/2-inch iron pipes tagged with a plastic plug and professional land surveyor's license number.	\$19,574
<b>Inundation Contour Elevation Layout:</b> Set wood lath with flagging at intervals of approximately 100 feet and some additional staking for sharp changes in direction along the proposed inundation contour elevation of 170.4 feet. The staking will be between the existing Nicasio Reservoir boundary and the adjacent private properties in Nicasio.	\$23,365
<b>Total Amount</b>	<b>\$228,929</b>

**ATTACHMENT(S):** None.