



Midpeninsula Regional
Open Space District

Memorandum

DATE: March 25, 2026

MEMO TO: Board of Directors

THROUGH: Ana Ruiz, General Manager 

FROM: Meredith Manning, Watershed Specialist

SUBJECT: Update on Findings of Geotechnical Engineering and Approach for Alpine Pond Drainage Improvements

Purpose of memo

Update the Board of Directors (Board) on results of geotechnical engineering investigations at Alpine Pond in Skyline Ridge Open Space Preserve (OSP) and the planned drainage improvements for Project# 80081 *Pescadero Watershed Sediment Reduction Implementation*.

Summary

The outlet of Alpine Pond has been identified as the largest sediment source on Midpeninsula Regional Open Space District (District) lands in the Pescadero Creek watershed. Geotechnical and civil engineers recently performed an assessment of dam stability and options for improving the outlet. Based on the assessment, a preferred solution has been developed to modify the pond outlet and allow for passive operation while reducing sedimentation to the creek.

Project purpose

In 2019, the San Francisco Bay Regional Water Quality Control Board issued a Total Maximum Daily Load (TMDL) for Pescadero Creek, requiring landowners to identify sources of sediment discharge related to current and legacy land use activities. For the District, the TMDL primarily required the evaluation of stream crossings on roads and trails; however, the District included other potential sediment sources, such as road failures and streambank erosion, even if these fell outside TMDL guidelines.

In December 2021, the Board authorized the development of a sediment-source inventory and water quality plan ([R-21-160, minutes](#)). The District subsequently hired consultants to survey all stream crossings and major sediment sources on District lands in the Pescadero Creek watershed, approximately 4,421 acres. These surveys identified the hillside erosion caused by outflow from Alpine Pond as the most substantial sediment source within District lands ([FYI October 12, 2022 minutes](#)). The well-loved pond provides a scenic backdrop and is an important element of programming for the David C. Daniels Nature Center, which is located on its eastern shore (Attachment 1). Alpine Pond was constructed in the 1950s and its outlet forms an artificial channel on a hillside that has since badly eroded. While the District is not obligated to take any

action at Alpine Pond under the TMDL, reducing sedimentation to the aquatic environment by modifying the pond's outlet supports the District's mission to improve habitat quality.

Results of geotechnical investigations

Following the sediment source survey, the District hired a geotechnical engineering consultant to evaluate potential drainage improvements at Alpine Pond ([R-24-31](#), [minutes](#)). The consultant found that Alpine Pond's dam is stable under static conditions and has a low risk of failing under seismic conditions. Dam material is more than twice as deep and extends further down the natural channel than was previously known. Using these results, the consultant proposed modifications to the pond's outlet to reduce sedimentation into Pescadero Creek.

Pond outflow drainage improvements

The preferred option to improve the pond outflow drainage involves installation of two standpipes with intakes at different elevations. Under normal conditions, outflow would drain through the lower drainpipe into the natural channel below the toe of the dam. When water levels rise during larger storm events, overflow drains through the higher elevation standpipe to the current spillway. By converting the existing spillway to an emergency spillway, the frequency and duration of flows in the artificial channel will be reduced, minimizing the potential for future erosion. The flashboard system at the existing outlet would be modified to maintain the pond's current maximum water level, maintaining the existing pond habitat. This design operates passively, minimizing maintenance for field staff, and aligns with regulatory agency guidelines for primary and emergency spillways.

Road and trail drainage improvements

The geotechnical investigation also revealed that runoff from the Sunny Jim Trail concentrates at the base of the dam and causes erosion. To prevent future erosion, it is recommended that the project include trail drainage modifications in addition to the pond outflow improvements.

The historic natural channel crosses Old Page Mill Trail at about ½ mile from Alpine Pond. This crossing is only several hundred feet below the proposed dam outflow. Because the channel will convey higher flows when used as the pond's primary spillway, the trail stream crossing will be improved to handle outflows in advance of any improvements made to Alpine Pond drainage.

Budget

The existing contract amount through 65% design is anticipated to be sufficient to continue design work. Upcoming scope in FY26 will include cost estimates for drainage improvements. There are sufficient funds in the FY26 budget for this work. Future fiscal years will include additional funds to complete contracted work. No additional funds are necessary at this time.

Anticipated schedule

FY26: conceptual design and cost estimates; initiate pre-consultation with tribal partners and regulatory agencies

FY27: 30% design plans; continue permitting with regulatory agencies

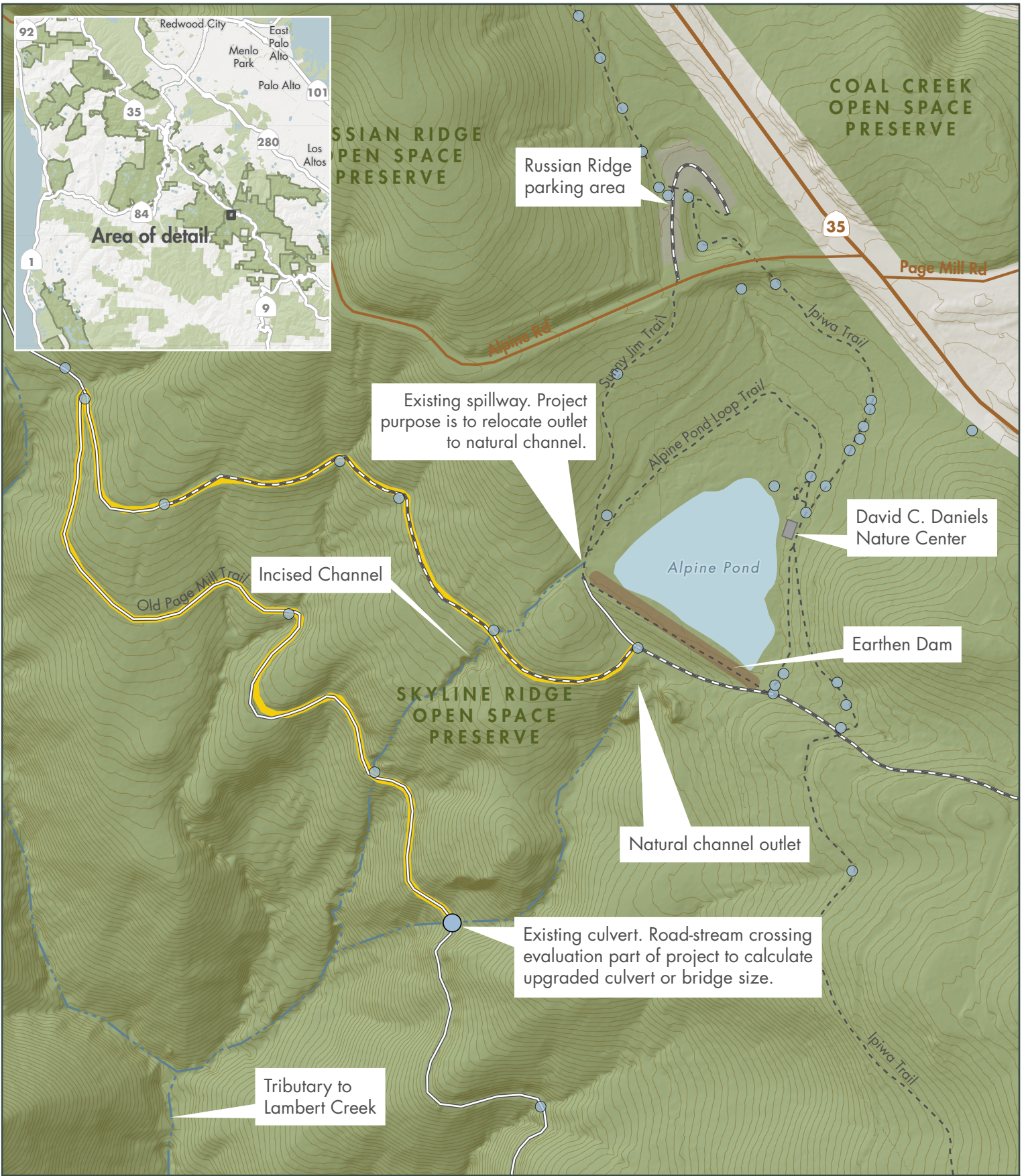
FY28: 65% design plans and CEQA; handoff design to E&C; continue permitting

FY29: handoff remainder of project to E&C to develop 90% and 100% design, bidding, and construction

Attachments

Attachment 1: Project Map

Path: G:\Projects\Skyline_Ridge\Alpine Pond\SR_AlpinePond\SR_AlpinePond.aprx
Created By: dvaughan



Attachment 1. Alpine Pond Dam Outlet Relocation

- Culvert
- Berm
- Intermittent creek
- 5 ft contour interval
- Midpen preserve

Midpeninsula Regional
Open Space District
(Midpen)
3/16/2026

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