Midpeninsula Regional
Open Space District

R-24-31
Meeting 24-07
March 13, 2024

AGENDA ITEM 3

AGENDA ITEM

Award of Contract to All Earth Geotechnical Engineering Inc., for Geotechnical Investigations and Engineering Design Services for the Pescadero Watershed Sediment Reduction Implementation Project, focused on Alpine Pond, within the Skyline Ridge Open Space Preserve

GENERAL MANAGER'S RECOMMENDATIONS

1. Authorize the General Manager to execute a contract with All Earth Geotechnical Engineering Inc., for the Pescadero Watershed Sediment Reduction Implementation Project for a base contract amount not-to-exceed $372,814 to complete geotechnical investigations, three dam concept plans, one road-stream crossing concept plan, and two final design plans suitable for bidding (dam and road-stream crossing).

2. Authorize a 10% contingency of $37,281 to be reserved for unanticipated issues, bringing the total not-to-exceed contract amount to $410,095.

SUMMARY

The General Manager recommends executing a contract with All Earth Geotechnical Engineering Inc., for geotechnical investigations and engineering design services for the Pescadero Watershed Sediment Reduction Implementation Project at Skyline Ridge Open Space Preserve (OSP) (Attachment 1) for a base amount of $372,814 plus a 10% contingency. The work is focused on improving the hydrology of Alpine Pond, which drains into the Pescadero Creek watershed and includes geotechnical findings that will inform the preparation of conceptual plans for multiple drainage and habitat improvement options. There are sufficient funds in the adopted Fiscal Year 2023-24 (FY24) project budget to cover the initial phase of the recommended action through the fiscal year. Funding for future years' budgets would be requested as part of the annual Budget and Action Plan process.

DISCUSSION

Alpine Pond is situated near the headwaters of an unnamed tributary of Lambert Creek, which is a tributary to Peters Creek that flows into Pescadero Creek and eventually the Pacific Ocean in San Mateo County. The pond provides the focal centerpiece at the David C. Daniels Nature Center. In December 2018, the San Francisco Bay Regional Water Quality Control Board (Water Board) adopted a Total Maximum Daily Load (TMDL) for sediment in the Pescadero Creek Watershed that went into effect in May 2019 (FYI September 11, 2019). The TMDL was issued primarily in response to increased sedimentation causing impaired habitat for endangered coho

salmon and threatened steelhead trout. Legacy roads in the watershed can be a prime contributor of sediment to the aquatic environment. These roads were not typically designed to handle large rainfall events, resulting in road failure especially at road-stream crossings.

Early Sediment Pollution Prevention Actions by the District
Recognizing the inadequate construction of legacy roads, the District completed a Pescadero Creek watershed-wide sediment survey in 2005 that was used to develop a treatment plan, 14 years prior to the TMDL. Since then, field staff have performed road improvements based on the 2005 survey findings that (at the time) included all District lands in the Pescadero Creek watershed. Once the TMDL went into effect in 2019, an updated sediment survey was required that revisited the former assessment sites and included new District lands purchased after the 2005 survey. This action was taken to comply with required implementation measures for sediment discharges associated with parks and open space lands that are subject to the TMDL. The updated sediment survey was completed in 2023 by consulting hydrologists. As required by the Water Board, a prioritized implementation plan with a schedule for repairs and/or replacement of high-priority road-related erosion sites was developed to protect the aquatic environment.

2023 Sediment Study Results
Based on findings from the 2023 survey, relative sediment contributions from District lands are low. Even estimated potential future inputs would remain below the target performance measures by the Water Board (FYI September 11, 2019). These encouraging findings are due primarily to the consistent efforts of field staff to improve and maintain legacy roads and new trails, and a large road removal project (of a failed road) in 2011 at the Big Dipper Ranch in Skyline Ridge OSP (R-11-64, Minutes).

Alpine Pond's Potential Sediment Contribution
The 2023 survey established that the site with the highest sediment delivery potential is the un-engineered outlet at the earthen dam of Alpine Pond. Potential sediment delivery in a 100-year rainfall event with catastrophic failure is estimated to be nearly half of all combined potential cubic yardage delivered in the District's entire Pescadero Creek watershed properties. The pond was constructed in the 1950s to supply water to a neighboring hog farm, and the outlet was not placed in the natural channel; instead, it was placed on an adjacent ridge, which has since eroded badly. The banks of the artificial outlet are expected to continue receding into the hillside, delivering additional sediment to the watercourse, with potential negative impacts to the dam itself.

Repair Options for Alpine Pond
A Request for Proposals and Qualifications (RFPQ) was issued for geotechnical and engineering services to complete the dam replacement and new spillway design, and other necessary upgrades to the upper pond area and a road crossing that lies below the spillway. Work is expected to be consistent with other recent pond redesign efforts the District has undertaken for legacy un-engineered earthen dams. Three local firms attended the onsite pre-proposal tour and shared ideas to streamline work efforts, including performing initial full geotechnical investigations to confirm the relative stability of the existing dam prior to undertaking full redesign. Based on this concept, an addendum was issued to the RFPQ redefining the scope of the project to include multiple project phases, beginning with Phase I Investigations and Concept Plans for the following three repair options:

(1) Construct an entirely new dam plus new spillway that flows directly into the natural channel;
(2) Reinforce the existing dam plus install a new spillway that flows directly into the natural channel; and
(3) Construct only a new spillway that flows into the natural channel.

A phased design and implementation approach will allow more prudent adaptive decision-making by the District depending on the results of the initial geotechnical study, should it indicate the earthen dam was relatively stable. For the dam, the scope of the proposed contract includes the completion of geotechnical investigations and the preparation of conceptual plans for the three drainage and habitat improvement options listed above, plus final designs for one selected option suitable for bidding. For the road-stream crossing, the scope includes one concept and one final design suitable for bidding. At the completion of the concept plan phase, a recommended repair option will be brought forward to the Board for consideration. Any subsequent contract amendments, if necessary, to complete the detailed design for the selected repair option will require Board approval.

Recommended Firm and Approach
All Earth Geotechnical Engineering, Inc., was the sole firm who submitted a proposal. This firm, based in Santa Cruz, California, is qualified to perform the scope of work at a fair and reasonable price and has successfully completed similar District projects. Their rates align with others in the industry, and they are available to begin immediately.

Price estimates have been established for each of the repair options, but only one option will move forward at the sole discretion of the District to 30%, 60%, and 90% design (the standard to submit for permits) once Phase I work is completed.

Other Associated Projects at Alpine Pond
Alpine Pond is accessible via a short walk from the Russian Ridge Preserve main parking area; accessibility improvements to and around the pond are anticipated to begin in Fiscal Year 2024-25 (FY25) as part of the Phase II ADA (Americans with Disabilities Act) Project. This contract, if awarded, would consider the ongoing accessibility improvement work to best meet future hydrologic, biotic, management, and visitor needs at the site.

FISCAL IMPACT

The FY24 adopted budget includes $175,000 for the 80081 - Pescadero Watershed Sediment Reduction project. There are sufficient funds in the project budget to cover the recommended action and expenditures. Funds for future year costs will be recommended in future fiscal year budgets as a part of the annual Budget and Action Plan process.

80081 - Pescadero Watershed Sediment Reduction	**Prior Year Actuals**	**FY24 Adopted**	**FY25 Projected**	**FY26 Projected**	**Estimated Future Years**	**TOTAL**
District Funded (Fund 40):	$0	$175,000	$85,000	$70,000	$620,000	**$950,000**
Grant Amount:	$0	$0	$0	$0	$0	**$0**
Total Budget:	**$0**	**$175,000**	**$85,000**	**$70,000**	**$620,000**	**$950,000**
Spent-to-Date (as of 02/13/24):	$0	$0	$0	$0	$0	**$0**

Encumbrances:	$0	$0	$0	$0	$0	**$0**
All Earth Geotechnical Engineering Base Contract:	$0	($175,000)	($197,814)	$0	$0	**($372,814)**
10% Contingency:	$0	$0	($37,281)	$0	$0	**($37,281)**
Budget Remaining (Proposed):	**$0**	**$0**	**($150,095)**	**$70,000**	**$620,000**	**$539,905**

This recommended action is not funded by Measure AA.

PRIOR BOARD AND COMMITTEE REVIEW

On September 11, 2019, an FYI was sent to the Board informing that: 1) the Water Board had previously adopted a TMDL for the Pescadero Creek watershed, 2) it had gone into effect, and 3) all landowners were obligated to comply with regulations including sediment assessments (FYI September 11, 2019).

On December 8, 2021, a request for award of contract for the Pescadero Creek sediment study was awarded to consulting hydrologists (R-21-160, minutes).

On October 12, 2022 an FYI was sent to the Board informing that: 1) the Water Board had been notified of the results of the TMDL sediment study, 2) Alpine Pond had been identified for treatment to reduce potential for sediment delivery, and 3) the FY23 budget and action plan included funds to begin assessing treatment options (FYI October 12th, 2022).

PUBLIC NOTICE

Public notice was provided as required by the Brown Act.

CEQA COMPLIANCE

This item is not a project subject to the California Environmental Quality Act.

NEXT STEPS

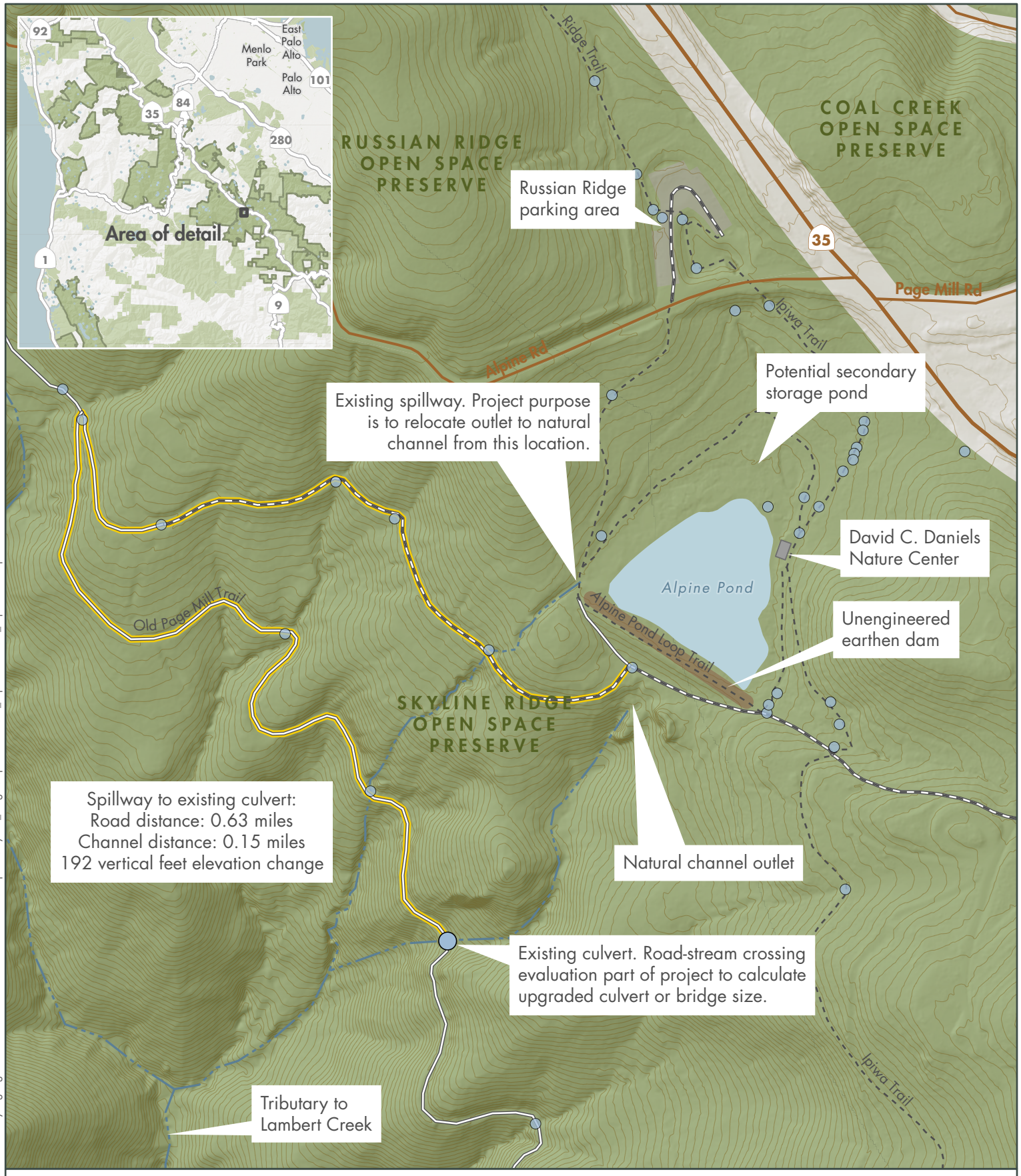
If the Board approves this contract, the General Manager will execute a contract to All Earth Geotechnical to provide geotechnical and engineering design services at Alpine Pond.

Attachment(s)
Attachment 1: Map of Alpine Pond project area

Responsible Department Head:
Kirk Lenington, Natural Resources Manager, Natural Resources Department

Prepared by / Contact person:
Meredith Manning, Watershed Specialist, Natural Resources Department

Graphics prepared by:
Nathaniel Greig, Senior Technologist, Information Systems and Technology Department



Path: G:\Projects\Skyline_Ridge\Alpine Pond\SR_AlpinePond\SR_AlpinePond.aprx

Created By: ngreig

Attachment 1. Alpine Pond Dam Reconfiguration and Outlet Relocation

Culvert
Berm
Intermittent creek
5 ft contour interval
Midpen preserve

Midpeninsula Regional Open Space District
(Midpen)
2/28/2024

Feet
0 150 300