



Midpeninsula Regional
Open Space District

R-23-05
Meeting 23-01
January 11, 2023

AGENDA ITEM 8

AGENDA ITEM

Partnership Agreement with the United States Geological Service for Reptile and Amphibian Monitoring to Inform Management Planning at Three Preserve Locations

GENERAL MANAGER'S RECOMMENDATION *den*

Authorize the General Manager to enter into a partnership agreement with the United States Geological Survey for a base amount of \$198,364 to provide reptile and amphibian monitoring.

SUMMARY

The Midpeninsula Regional Open Space District (District) is interested in partnering with the United States Geological Survey (USGS) to expand the study of threatened and endangered reptile and amphibian populations at three Preserve locations as follows:

- Resurvey an existing population of endangered San Francisco garter snake (SFGS) at Russian Ridge Open Space Preserve to evaluate the effectiveness of habitat enhancement actions completed since the population was last surveyed.
- Develop a Habitat Management Plan for threatened and endangered reptile and amphibian populations at Cloverdale Ranch (including SFGS and California red-legged frog) to inform future maintenance, stewardship, conservation grazing, patrol, and public access actions for the site.
- Investigate the suitability of La Honda Creek Open Space as a potential introduction/reintroduction site for the SFGS, based on suitable habitat and sufficient prey.

There are sufficient funds in the Fiscal Year 2022-23 (FY23) adopted budget to complete the work through the end of the fiscal year. Funding for FY24 would be requested as part of the annual Budget and Action Plan process. USGS would contribute an additional \$34,116 of their funds toward this effort.

BACKGROUND

The San Francisco garter snake (SFGS) (*Thamnophis sirtalis tetrataenia*) is both federal and state endangered and considered a fully protected species by the state of California. SFGS are only found on the San Francisco Peninsula in small populations, numbering in the tens to hundreds, with the largest population physically and genetically isolated at the West of Bayshore property (San Francisco airport). One of their primary prey species is the California red-legged frog (CRLF) (*Rana draytonii*), which is a federally threatened species and state species of special concern and found abundantly throughout most District preserves.

Although much of the District's land (in San Mateo County) is considered suitable habitat for SFGS, to date, they have only been observed in a few Preserves and only one reproducing population is known to occur on District lands at Russian Ridge Open Space Preserve. There is also a population at Cloverdale Ranch, which the Board authorized for purchase on December 10, 2022.

Since 2012, the District has worked as a permitted entity approved by the US Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) to recover both CRLF and SFGS on District lands. Working with these agencies, the District is allowed to conduct research and perform other management actions to recover these species. The District completes annual monitoring, reporting, and work plans as part of this long-standing recovery partnership.

DISCUSSION

Resurvey San Francisco garter snake:

The District previously worked with the USGS from 2014 to 2017 to assess the abundance and distribution of SFGS at Russian Ridge. Through this work, the USGS was able to show that the Russian Ridge population does not yet meet the total number of snakes or the sex ratio needed to be eligible to contribute to species recovery under the USFWS 1985 Recovery Plan. However, habitat enhancements completed under the 2012 Habitat Management Plan (Plan) may have improved conditions and given the population a boost. Habitat enhancement actions completed to date include pond improvements, expansion of conservation grazing and associated fencing and water system improvements, ongoing invasive plant control, and non-native fish and bullfrog removal. Per the 2012 Plan, the SFGS population study should be repeated following two or more years after completing the management actions to compare the results with the baseline data. To complete this task, the District is proposing to partner with the USGS to resurvey the SFGS population at Russian Ridge.

The Principal Investigator for this work with USGS is Dr. Brian J. Halstead, who is a Research Wildlife Biologist at the USGS Western Ecological Research Center in Dixon, California. Per his biography on the USGS website: "He focuses on conservation of reptiles and amphibians, particularly applications of population ecology to species conservation... Currently, Dr. Halstead's research focuses on the effects of water availability on the distribution, behavior, and demography of giant gartersnakes (*Thamnophis gigas*); the response of SFGS to grazing and management of aquatic invasive species; and the influence of abiotic and biotic variables on the distribution and demography of amphibian populations in northern California."

USGS and their Principal Investigator know the site, survey locations, methods, and data intimately and are best suited to assist the District in resurveying the SFGS population and comparing new population numbers to the baseline data.

Habitat Management Planning:

The General Manager also proposes partnering with USGS to prepare a Habitat Management Plan for reptile and amphibian species at Cloverdale Ranch. When escrow closes for Cloverdale Ranch, the onsite populations will be entrusted to District care for ongoing stewardship. USGS has been studying these Cloverdale Ranch populations since 2007. With their extensive knowledge of the site, they are best suited to complete the fieldwork, address data gaps and assist

with creation of a Habitat Management Plan for the site to inform future maintenance, stewardship, conservation grazing, patrol, and public access actions.

Introduction/Reintroduction Efforts:

The General Manager also proposes partnering with the USGS to evaluate the suitability of the La Honda Creek Open Space Preserve (LHC), which has an abundance of CRLF, as a potential SFGS reintroduction site. The District has been monitoring reptile and amphibian populations at the LHC Preserve since 2008 and has previously worked with USGS to enhance survey methods to better assess trends in the CRLF populations over time. USGS has extensive experience with population modeling for both SFGS and CRLF, which makes them uniquely qualified to evaluate both potential host sites and donor sites for introduction or reintroduction efforts of SFGS to further aid in species recovery. If LHC is found to be a suitable site, USGS would then develop a plan for introducing SFGS, as well as a post-introduction monitoring plan.

The feasibility investigation and reintroduction plan developed in partnership with USGS as a federal entity is expected to be well received by USFWS (also a federal agency) and potentially result in streamlining permit approvals that would save costs and time. If reintroduction at LHC is feasible, approved, and implemented successfully, it could create an additional SFGS population to aid in species recovery.

Conclusion

USGS's unique expertise with reptile and amphibian population monitoring, past collaboration, and familiarity with the work sites makes them uniquely qualified and they have confirmed they are available to perform these services in the requested timeline to meet District needs. In addition, USGS would be contributing an additional \$34,116 of their own funds to this work effort.

FISCAL IMPACT

Project expenditures would be split between two projects: Cloverdale Ranch Land Opportunity project VP13-001 (task 1) and Districtwide Aquatic Habitat Assessment and eDNA Collection project 80058 (tasks 2 and 3). In addition, USGS would contribute \$34,116 to this work effort; \$10,568 for the Cloverdale Ranch Land Opportunity project VP13-001 (task 1), and \$23,548 for Districtwide Aquatic Habitat Assessment and eDNA Collection project 80058 (tasks 2 and 3).

The FY23 adopted budget includes \$215,000 for the Cloverdale Ranch Land Opportunity project VP13-001. There are sufficient funds in the project budget to cover the recommended action and expenditures through the end of the fiscal year.

Cloverdale Ranch Land Opportunity VP13-001*	Prior Year Actuals	FY23 Adopted	FY24 Projected	FY25 Projected	Estimated Future Years	TOTAL
Total Budget:	\$119,471	\$215,000	\$20,000	\$0	\$0	\$354,471
Spent-to-Date (as of 12/09/22):	(\$119,471)	(\$44,334)	\$0	\$0	\$0	(\$163,805)
Encumbrances:	\$0	(\$76,416)	\$0	\$0	\$0	(\$76,416)
USGS Partnership Agreement:	\$0	(\$77,136)	\$0	\$0	\$0	(\$77,136)

Budget Remaining (Proposed):	\$0	\$17,114	\$20,000	\$0	\$0	\$37,114
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* Once land acquisition is complete expenditures will be reallocated from VP13-001 project to MAA13-003 Cloverdale Ranch Land Opportunity project.

The FY23 adopted budget includes \$130,000 for the Districtwide Aquatic Habitat Assessment and eDNA Collection project 80058. There are sufficient funds in the project budget to cover the recommended action and expenditures through the end of the fiscal year. Funding for FY24 would be requested as part of the annual Budget and Action Plan process.

Districtwide Aquatic Habitat Assessment and eDNA Collection #80058	Prior Year Actuals	FY23 Adopted	FY24 Projected	FY25 Projected	Estimated Future Years	TOTAL
Total Budget:	\$0	\$130,000	\$120,000	\$0	\$0	\$250,000
Spent-to-Date (as of 12/9/22):	\$0	\$0	\$0	\$0	\$0	\$0
Encumbrances:	\$0	\$0	\$0	\$0	\$0	\$0
USGS Partnership Agreement:	\$0	(\$52,787)	(\$68,441)	\$0	\$0	(\$121,228)
Budget Remaining (Proposed):	\$0	\$77,213	\$51,559	\$0	\$0	\$128,772

Funding for the Districtwide Aquatic Habitat Assessment and eDNA Collection project 80058 is not funded by Measure AA.

BOARD AND COMMITTEE REVIEW

The Board of Directors authorized the initial San Francisco garter snake surveys at Russian Ridge on November 20, 2013 ([R-13-105](#)).

PUBLIC NOTICE

Public notice was provided as required by the Brown Act.

CEQA COMPLIANCE

Entering into a partnership agreement is not a project subject to the California Environmental Quality Act. In addition, this work is categorically exempt from CEQA under Article 19, Section 15306:

Section 15306 exempts basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded.

Work under the proposed partnership agreement supports planning and feasibility for possible future actions that have not yet been approved, adopted, or funded.

NEXT STEPS

If approved, the District will enter into a partnership agreement with USGS and begin studies at Cloverdale Ranch and LHC in FY23 and begin surveys at Russian Ridge in FY24. A final Habitat Management Plan will be prepared to inform future maintenance, stewardship, conservation grazing, patrol, and public access at Cloverdale Ranch. The results of the suitability study will be used to assess potential reintroduction of SFGS at LHC. Results from the resurvey at Russian Ridge would be used to inform any adaptive management needed to further conserve and recover SFGS at the site. Any projects resulting from these studies would be brought to the Board for approval as future projects through the annual action plan and budget process.

Attachment(s)

1. Map of Preserves where work would occur under the partnership agreement.

Responsible Department Head:

Kirk Lenington, Natural Resources Department

Prepared by:

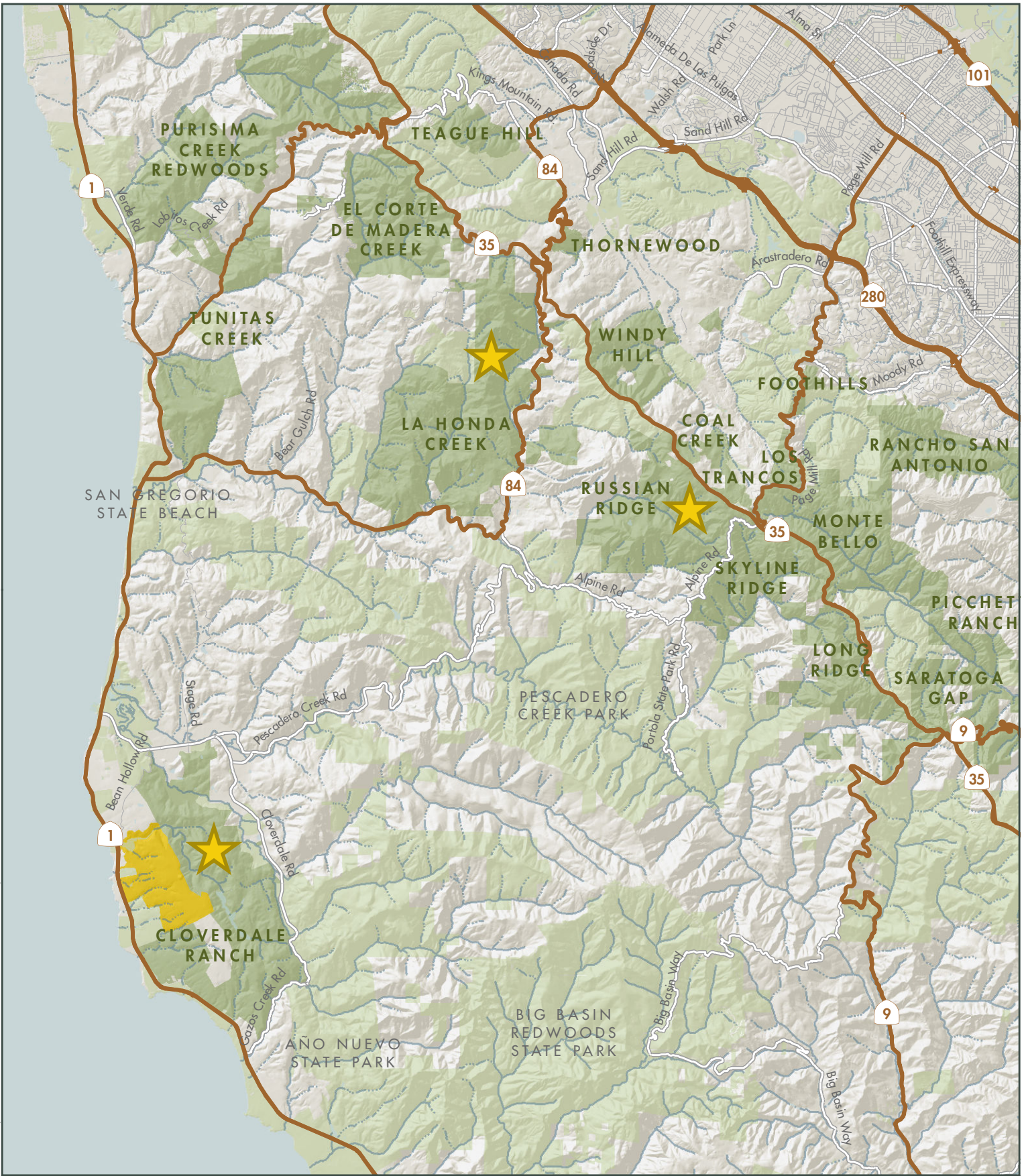
Julie Andersen, Senior Resource Management Specialist, Natural Resources Department

Contact person:





Julie Andersen, Senior Resource Management Specialist, Natural Resources Department

Graphics prepared by:

Anna Costanza, GIS Technician



Attachment 1

-  Midpen preserve
-  Other protected land
-  Private property
-  Proposed future acquisition

Midpeninsula Regional
Open Space District
(Midpen)
12/12/2022



While the District strives to use the best available digital data, these data do not represent a legal survey and are merely a graphic illustration of geographic features.