



City Council Staff Report

From: City Manager

Report Type: CONSENT CALENDAR

Lead Department: Public Works

Meeting Date: April 22, 2024

Report #:2402-2683

TITLE

Approval of a Five-Year Technical Assistance Agreement with the United States Geological Survey in an Amount Not-to-Exceed \$924,745 for Scientific Monitoring Services at the Regional Water Quality Control Plant Outfall and Horizontal Levee Pilot Project Site (WQ-22001); CEQA Status- Categorically Exempt Section 15306

RECOMMENDATION

Staff recommends that Council approve and authorize the City Manager or their designee to execute a technical assistance agreement with the United States Geological Survey in the amount not-to-exceed \$924,745 over five years for monitoring services. Services will include the continuation of a decades-long study of metals concentrations at the outfall of the Regional Water Quality Control Plant and required monitoring and habitat utilization studies in conjunction with the Horizontal Levee Pilot Project (WQ-22001).

BACKGROUND

The City of Palo Alto owns and operates a Regional Water Quality Control Plant (RWQCP) serving the communities of Los Altos, Los Altos Hills, Mountain View, Palo Alto, Stanford, and East Palo Alto Sanitary District, and manages an award-winning Watershed Protection Program with the goal of preventing pollution to the San Francisco Bay. The RWQCP has partnered with the United States Geological Survey (USGS) on an on-going study since the 1970s, when the RWQCP outfall was identified as a point source for elevated metals concentrations that were found in the tissues of mud-dwelling invertebrates, such as clams and worms.¹ Concentrations of metals were elevated due to inputs from the RWQCP effluent, but with the implementation of more advanced wastewater treatment and pollution prevention programs, these pollutants declined drastically in the 1980s, continued to decline through the 1990s, and have remained at low levels since. The City continued this study, which is one of the largest datasets of its kind,

¹ Near-Field Receiving-Water Monitoring of Trace Metals and a Benthic Community Near the Palo Alto Regional Water Quality Control Plant in South San Francisco Bay, California, <https://pubs.usgs.gov/publication/ofr20231017>

and continued to assess ecosystem health and support related regulatory permit compliance at the RWQCP.

Separately, the City secured Environmental Protection Agency grant funding and executed an agreement with the Association of Bay Area Governments (ABAG) to build a horizontal levee pilot system to the east of the RWQCP along the Bay margin. The Horizontal Levee Pilot Project is a collaboration with ABAG's San Francisco Estuary Partnership, which will administer the project construction, and other partner groups and institutions. It is the first project of its kind to construct a horizontal levee that directly connects to the Bay and is irrigated with treated wastewater. The project will pilot a "nature-based solutions" approach to buffer against the impacts of sea level rise and increased storm surges, and provide high quality habitat for marsh species that otherwise face shrinking habitat as sea level rises. Post-construction monitoring is required as part of resource agency construction permits, and to answer questions that will be of regional importance for sea level rise planning.

ANALYSIS

The technical assistance agreement with USGS (Attachment A) will continue a decades-long study of trace metal concentrations in sediment and clam tissues at the outfall of the RWQCP, currently conducted under Joint Funding Agreement 21NKJFA141². It will also fulfill new post-construction monitoring requirements over the next five years for the Horizontal Levee Pilot Project. The agreement scope includes:

- 1. Continued Legacy Research (1977-present) – Monitoring contaminants in the benthic community (clam and sediment study):**

This long-term study looks at trace metals such as chromium, copper, silver, mercury, selenium, nickel, aluminum, and iron in the sediment and tissues of clam species at the outfall of the RWQCP and a control location. It also profiles the benthic community structure and examines concentrations of trace metals (notably silver and copper) in sediment and tissue samples collected from clams at the RWQCP outfall. The City of Palo Alto has partnered with the USGS on this effort since 1977 and this contract would extend this effort from 2024-2029. Data from this long-term dataset has been used in the past to support permit compliance and regulatory development, and will be used in the future as the RWQCP brings online large capital projects such as the Secondary Treatment Upgrades Project.

² U.S. Department of the Interior, U.S. Geological Survey Joint Funding Agreement for Water Resource Investigations, Agreement # 21NKJFA141, May 1, 2021 to April 30, 2024;
<https://www.cityofpaloalto.org/files/assets/public/v/3/public-works/staff-reports-all/2024/21nkjfa141-final-signed-contract-usgs.pdf>

2. New Monitoring for the Horizontal Levee Pilot Project (HLPP):

New monitoring is required for the HLPP after construction is finished in 2025.

Information gained from this project will be of regional importance and will inform the building of horizontal levees, habitat enhancements, and the beneficial use of wastewater in future projects throughout the Bay Area. Monitoring requirements during the agreement term will include:

- **Wetland monitoring to fulfill resource agency HLPP construction permit requirements**, including effluent water quality and volumes, slope stability, vegetation establishment, habitat types, conversion of adjacent marsh vegetation, and presence of invasive plants. This component of the HLPP is required by the San Francisco Bay Regional Water Quality Control Board, United States Army Corps of Engineers, California Department of Fish and Wildlife, and the San Francisco Bay Conservation and Development Commission.
- **Post-construction assessment of salt marsh harvest mouse habitat use and food resources**. This five-year study will determine the presence of the salt marsh harvest mouse, an endangered species, in the project area and at a reference site, and how its available food and shelter resources are utilized as the HLPP develops over time. This study will identify how horizontal levees, such as the HLPP, provide a benefit to the salt marsh harvest mouse, e.g., by providing additional cover during high tides, better food resources, and/or enhanced nesting habitat.

FISCAL/RESOURCE IMPACT

The HLPP project construction is included in the City's Capital Improvement Budget as Project Number WQ-22001. Over the five-year term of the USGS contract, \$494,035 will be funded by the Watershed Protection Operating Budget and \$430,710 will be funded by WQ-22001. The legacy monitoring will continue to be funded in full by the Watershed Protection Operating Budget. The HLPP monitoring will be funded jointly through the WQ-22001 and the Watershed Protection Operating Budget. Funding for the first year of this contract is available in the Fiscal Year 2024 Adopted Wastewater Treatment Fund operating budget, and the Fiscal Year 2024 Adopted Wastewater Treatment Fund Horizontal Levee Pilot Capital project (WQ-22001).

STAKEHOLDER ENGAGEMENT

USGS legacy monitoring has not included stakeholder engagement since it is an ongoing, decades-long study. The new USGS monitoring requirements for the HLPP have been referenced in general terms as part of the much broader and extensive outreach for the HLPP design and construction which has included 20 stakeholder engagement activities such as community events, and presentations to local non-governmental organizations, and to the

Parks and Recreation Commission. Council adopted a Park Improvement Ordinance and approved the agreement with ABAG on January 22, 2024.³

ENVIRONMENTAL REVIEW

This project is exempt from review under the California Environmental Quality Act (CEQA) under section 15306 of the CEQA Guidelines (information collection).

Additionally, under this contract, the USGS will obtain permits/permit coverage determinations from the United States Fish and Wildlife Service and California Department of Fish and Wildlife prior to any fieldwork.

ATTACHMENTS

Attachment A: Technical Assistance Agreement with the US Geological Survey

APPROVED BY:

Brad Eggleston, Director Public Works/City Engineer

³ City Council Special Meeting, Monday, January 22, 2024, Agenda Item #5, Staff Report 2303-1230
<https://portal.laserfiche.com/Portal/DocView.aspx?id=70190&repo=r-704298fc&searchid=eb00e39c-84f0-4fc1-82c5-ffef8304c82e>