**DATE:** March 4, 2025

**TO:** Mayor and City Council

**FROM:** Director of Public Works

**SUBJECT:** Adopt a Resolution Authorizing the City Manager to Execute a Professional Services Agreement with Sherwood Design Engineers in an Amount Not-To-Exceed $600,000 for Preliminary Design Services for the Nature Based Solution Feasibility Study Project at the Water Resource Recovery Facility (WRRF), Project No. 07809 in Fund 612 Sewer Improvement Fund

## RECOMMENDATION

That City Council adopts a resolution (Attachment II) authorizing the City Manager to execute a professional services agreement (PSA) with Sherwood Design Engineers (Sherwood) in an amount not to-exceed (NTE) $600,000 for preliminary design services for the Nature Based Solutions Feasibility Study Project at the WRRF, Project No. 07809 in Fund 612 Sewer Improvement Fund.

## SUMMARY

The City of Hayward (City), in partnership with the Association of Bay Area Governments (ABAG), applied for and received a grant (agreement number 98T55001) from the United States Environmental Protection Agency (USEPA) for the *Hayward Water Pollution Control Facility Multi-Benefit Shoreline Project* to further study and begin preliminary design of a horizontal levee and constructed wetland at the western end of the WRRF, in the amount of $600,000. On April 16, 2024[1], City Council Resolution No. 24-067 authorized the City Manager to execute a funding agreement, accept $600,000 in USEPA grand funds, and appropriate $600,000 from Fund 612 to the Nature Based Solutions Feasibility Study Project No. 07809 (Project) at the WRRF. This agreement was executed on October 1, 2024.

On November 20, 2024, the City issued a Request for Proposal (RFP #25-018) through the City's OpenGov procurement portal for a consultant to prepare preliminary design drawings, a permitting study, an operations and maintenance study, and a cost estimate for the *Hayward Water Pollution Control Facility Multi-Benefit Shoreline Project* that seeks to utilize a nature-based solution (NBS) to wastewater treatment. The project would consist of constructed

[1] https://hayward.legistar.com/LegislationDetail.aspx?ID=6635303&GUID=E15C3971-6BB7-43C0-B855-89794911A013&Options=&Search=

treatment wetlands and/or a horizontal ecotone levee at the WRRF owned and operated by the City, adjacent to the Hayward Regional Shoreline.

Staff completed an extensive review process of the two proposals submitted by the January 17, 2025 deadline and recommend that Sherwood Design Engineers prepare the NBS preliminary design documents. Staff's evaluation criteria included demonstrated expertise and experience in the design of nature-based solutions for wastewater treatment, project management of a multi-disciplinary team, team cohesion, permitting requirements, and reasonableness of the level of labor effort and overall cost to complete the project.

**BACKGROUND**

The City owns and operates the WRRF (formerly Water Pollution Control Facility, WPCF), which treats an average flow of approximately eleven million gallons per day (MGD) of wastewater from Hayward residences and businesses prior to discharge to the San Francisco Bay through the East Bay Dischargers Authority (EBDA) effluent conveyance system. For much of the WRRF's history, a portion of the treatment consisted of oxidation ponds at the west end of the City's WRRF property. While these ponds are no longer an active part of the treatment process, they are occasionally used to hold excess flows, primarily during wet weather events.

The City is a member of the Hayward Area Shoreline Planning Agency (HASPA), a joint powers agency consisting of representatives from the City of Hayward, East Bay Regional Park District (EBRPD), Hayward Area Recreation and Park District (HARD), and Alameda County Mosquito Abatement District. In February 2021, HASPA completed the Hayward Regional Shoreline Adaptation Master Plan (HRSAMP), which developed multi-benefit strategies for the shoreline, its existing infrastructure, and the surrounding natural habitat to adapt to sea level rise. The HRSAMP identified the site of the former oxidation ponds at the WRRF as a potential location for a freshwater treatment wetland, and its western perimeter as an ideal location for a horizontal levee to protect the WRRF and other local infrastructure from sea level rise. Treatment wetlands and horizontal levees are both examples of NBS. According to the Federal Emergency Management Agency (FEMA), NBS are defined as sustainable planning, design, environmental management and engineering practices that weave natural features or processes into the built environment to promote adaptation and resilience.

In 2020, EBDA contracted with Environmental Science Associates (ESA) to design a horizontal levee at Oro Loma Marsh, and, as part of that effort, commissioned a study to further investigate the feasibility of implementing NBS at the WRRF site. In addition, as part of the WRRF Improvements - Phase II Project, a technical memorandum was prepared by Brown and Caldwell to further evaluate and confirm the feasibility of constructing a horizontal levee, constructed wetland, or both, at the WRRF former oxidation pond site. These studies also recommended potential next steps to making NBS a reality.

## DISCUSSION

In 2022, ABAG applied for a grant from the USEPA's San Francisco Water Quality Improvement Funds for implementing and monitoring NBS at several bay area locations, including the WRRF's former oxidation ponds. ABAG was awarded this grant in 2023, which includes $600,000 for the City to prepare preliminary design drawings, an engineer's cost estimate, an operations & maintenance study, a permitting study, and alternatives analysis. This work would be performed by consultants and overseen by City staff, with costs reimbursed by USEPA. Staff anticipate that all $600,000 of grant funds will be required to complete the preliminary design. Staff anticipate the cost of constructing the proposed improvements to be in the tens of millions of dollars and would seek grant funding upon completion of the preliminary design effort. The preliminary design effort will also include an opinion of probable construction costs to help the City to determine the extent of grant funding required.

NBS at the WRRF has the potential to offer a range of benefits to both the community and the environment. A horizontal levee could protect nearby facilities from future sea level rise, create an opportunity to expand and protect the Bay Trail, foster wildlife refugia, and provide polishing treatment to a portion of the City's wastewater flow prior to discharge to the Bay. Constructed wetlands would contribute additional ecological enhancements while also providing polishing treatment for a larger portion of wastewater flow. This additional treatment could further reduce nutrient loadings to the San Francisco Bay beyond what is already projected to be achieved by the Phase II Improvements project, may become necessary if the Regional Water Quality Control Board further tightens regulations.

## FISCAL IMPACT

The City was awarded a total of $600,000 in USEPA grant funds. On April 16, 2024, City Council Resolution No. 24-067 appropriated $600,000 from the Sewer Improvement Fund (Fund 612) to the Nature-Based Solution Feasibility Study Project No. 07809. Upon proof of expenditures, all costs up to $600,000 will be reimbursed through the grant.

This grant requires a City match of $600,000, and this requirement has been completed by the expenses already incurred from the City's WRRF Phase II Improvements Project No. 07760 in Fund 612 Sewer Improvement Fund. There is no net long-term impact to the City or to the General Fund.

## ECONOMIC IMPACT

This item does not provide a direct economic impact to the City, but a horizontal levee, if ultimately implemented in concert with other projects recommended by HASPA, could protect various facilities in Hayward from sea level rise. Facilities likely protected by a horizontal levee at this project site would include the WRRF, and various nearby industrial businesses in the area.

## STRATEGIC ROADMAP

This agenda item supports the Strategic Roadmap Priorities to Champion Climate Resilience & Environmental Justice and Invest in Infrastructure.

*Champion Climate Resilience & Environmental Justice*
Mitigate environmental
and climate impacts, with an emphasis on vulnerable communities

*Invest in Infrastructure*
Enhance local water supplies and wastewater systems – This project would be an investment in enhancing the City's wastewater treatment process.

## SUSTAINABILITY FEATURES

Overall, the project focuses on designing sustainable, nature-based infrastructure. As part of this effort, the existing oxidation ponds would be converted to a freshwater treatment wetland to provide enhanced treatment of wastewater flow. Additionally, the proposed horizontal levee will offer flood protection, increase resilience against sea level rise, create opportunities to expand and protect the Bay Trail, and serve as a transition zone between aquatic and terrestrial ecosystems,

## PUBLIC CONTACT

The project includes a web page[2] that is hosted on the City's website which contains periodic updates. Additionally, a key component of this work will be engaging local stakeholders such as Hayward Area Recreation District, East Bay Regional Parks, Alameda County Mosquito Abatement District, and other local community groups.

## NEXT STEPS

If City Council approves this item, staff will prepare and execute a Professional Services Agreement with Sherwood Design Engineers for Nature Based Solutions preliminary design services. The grant expires in December 2026. So as to comply with the funding period of the grant, the City intends to complete all tasks by October 2026.

*Prepared by*: Steven Wolfe, Associate Civil Engineer

*Reviewed by*: Kyle Carbert, Principal Utilities Engineer

[2] https://stories.opengov.com/haywardca/published/8IWaSDcXh

*Recommended by*: Alex Ameri, Director of Public Works

Approved by:

Dr. Ana M. Alvarez, City Manager