



DATE: July 10, 2023

TO: Honorable Mayor and Members of the City Council through City Manager

FROM: Josh Minshall, PE, Senior Civil Engineer, Public Works & Utilities (PW&U)
Gina Benedetti-Petnic, PE, Assistant Director of PW&U
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SUBJECT: Resolution Accepting Completion of the Ellis Creek Water Recycling Facility
Tertiary Expansion—Ultraviolet Channel Coating Project by Resource
Development Company, and Release of the 10% Retention

RECOMMENDATION

It is recommended that the City Council adopt the attached Resolution accepting completion of the Ellis Creek Water Recycling Facility Tertiary Expansion—Ultraviolet Channel Coating Project by Resource Development Company, and release of the 10% retention.

BACKGROUND

To meet growing demands for recycled water, Ellis Creek Water Recycling Facility (ECWRF) requires upgrades to its filtration and ultraviolet light (UV) disinfection processes. Treatment to tertiary standards allows recycled water to be utilized for unrestricted use, including irrigation for rural and urban applications. Demand for recycled water is expected to grow as additional distribution lines are constructed within the City and to adjacent agricultural properties.

The City has been recycling water since the 1970s. The ECWRF has been operational since 2009. In 2018, the City recycled 581 million gallons (1,783 acre-feet) of water. This represents 31% of the total wastewater treated in 2018. Recycled water irrigates over 1,500 acres within the service area and is distributed at parks, schools, open spaces, agricultural land, and ECWRF. The end-user demand for recycled water continues to grow and to help meet these demands for increased capacity as well as meeting the City's goal of minimizing discharges to the river, the Tertiary Process Upgrades Project (Project) has been designed and is nearing the construction phase. This project will increase tertiary treatment capacity by 45% from 4.7 MGD to 6.8 MGD.

The project to increase recycled water was split into multiple phases. Phase 1, referred to as the UV Channel Coating Project, included recoating the UV channels to provide for more efficient maintenance and improve overall longevity. Phase 1 was performed in preparation for installing new equipment in later phases of the capacity expansion.

Prior to the UV Channel Coating Project, the rough and pitted texture of the concrete UV channels promoted the buildup of bacteria and residue, which required frequent maintenance by operations personnel. The smooth finish of the new coating will greatly reduce the buildup and therefore reduce the maintenance needed. Additionally, the coating will protect the concrete to maintain the structural integrity of the UV channels.

UV channels 1 and 2 are currently in service; channel 3 will be added into service during Phase 2 of the project, which is currently under construction.

The specialized coating system, EPX-C-6-SC (EcoSystem Endura Flex) was applied along the length of the walls and bottoms of each channel within the UV treatment area.

DISCUSSION

On November 7, 2022, by Resolution 2022-173 N.C.S., the City Council authorized the award of a contract to Farr Construction Corp. dba. Resource Development Company (RDC) for Phase 1: UV Channel Coating, in the amount of \$244,500. The final total construction cost for the project is \$265,500, inclusive of one change order totaling a net increase of \$21,000.

The single change order consisted of the fabrication, installation, and removal of a temporary bulkhead for each channel to ensure a watertight seal to maintain the channel moisture conditions needed for the application of the coatings. The existing equipment at the facility was not able to provide a completely watertight seal by itself.

The EcoSystem Endura Flex coating system was applied along the length of the walls of each channel within the UV treatment area as designed. The work began in January and was completed at the beginning of May, in accordance with the project schedule, recycled water operational needs, and weather conditions. The final corrections and inspection were completed on June 2, 2023.

There are no disputed claims, and the project was completed satisfactorily.

PUBLIC OUTREACH

A project sign was installed at the Cypress Drive entrance to ECWRF to provide notice of the project in accordance with funding guidelines.

This agenda item appeared on the City's tentative agenda document on June 19, 2023, which was a publicly noticed meeting.

COUNCIL GOAL ALIGNMENT

The City Council has identified "Our Environmental Legacy" as one of its key strategic initiatives for 2021-2023.

- #46 – "Establish and promote a citywide sustainability program leading with exemplary environmental practices."

- #42 – “Find ways for City operations to reduce greenhouse gas emissions, conserve water, decrease waste, and minimize the use of fossil fuels and investigate and pursue options for carbon sequestration.”
- #53 – “Continue to expand recycled water services to support local agriculture and groundwater and surface water resources.”
- #70 – “Continue to focus on water conservation and urban recycled water expansion.”

CLIMATE ACTION/SUSTAINABILITY EFFORTS

This proposed action supports the above goals, and when implemented will increase the production of recycled water to meet greater demands for irrigation and agricultural purposes throughout Petaluma and reduce the use of drinking water for these purposes.

The Petaluma Climate Action Framework Section 3, “Adaptation & Social Resilience” identifies the following climate action goal: “Develop resilient infrastructure and community readiness, including backup sources of water, power, and communications.” This project promotes the reliability of backup sources of water by protecting and enhancing the UV treatment channels which are critical to producing recycled water at ECWRF.

ENVIRONMENTAL REVIEW

The original Environmental Impact Report (EIR) for the ECWRF was certified in August 2002 and subsequently modified in April 2004, August 2005, February 2006, and May 2007 (SCH # 2007052146). On May 7, 2007, the City Council adopted Resolution 2007-080 N.C.S. certifying an addendum to the ECWRF EIR approving proposed project revisions and adopting findings of fact regarding changes to the ECWRF to increase peak capacity for tertiary treatment from 4.0 to 6.7 million gallons per day (gpd).

On August 14, 2018, the Sonoma County Water Agency Board, acting as the lead agency for the North Bay Water Reuse Authority (NBWRA) and as lead agency pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) certified the NBWRA Phase 2 Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS) (SCH #2017072051). On September 17, 2018, the City Council, acting as an NBWRA member agency and as a responsible agency under CEQA, adopted Resolution 2018-147 N.C.S. approving and declaring the City’s intent to carry out City projects identified in the NBWRP Phase 2 EIR/EIS, adopting a mitigation monitoring and reporting plan, and a statement of overriding considerations. The Phase 2 Program projects evaluated in the EIR/EIS included increasing the tertiary capacity at the ECWRF from 6.7 million gpd to 6.8 million gpd, expanding the urban recycled water distribution system, and agricultural recycled water expansion. The environmental impacts related to the tertiary process upgrades have been addressed in the environmental review conducted as part of the original ECWRF EIR, the May 7, 2007 addendum, the original Water Recycling Enhancement Plan EIR, the December 2015 and May 2018 addenda, the August 14, 2018, NBWRA FEIR/EIS, and Resolution 2018-147 N.C.S. that was adopted September 17, 2018. No separate, subsequent, or supplemental environmental review is warranted for this action.

FINANCIAL IMPACTS

The total amount invoiced by Resource Development Co. is \$265,500, inclusive of the original contract amount of \$244,500 plus one change order in the amount of \$21,000.

The total approved budget for the Tertiary Filtration Expansion Project is \$18,792,000, as shown in the FY 23/24 Proposed Operating and Capital Improvement Project Budget. The UV Channel Coating Project is Phase 1 of the overall project. The funding is shown as Waste Water Capital Funds for FY 22/23 since the grant funding budgeted is for the completion of the overall expansion project at the end of next year. The following is a breakdown of the categories in the referenced budget for the overall project (all phases of work):

Itemized Budget Breakdown C66401416	FY 22/23 Revised Budget	Total Project Budget
Uses		
Design/Planning/Environmental	\$ 400,000	\$ 1,751,000
Administration/Legal Services	\$ 6,000	\$ 16,000
Construction Contracts	\$1,163,000	\$ 12,346,000
Construction Management	\$ 200,000	\$ 1,501,000
Contingency	\$ 291,000	\$ 2,817,000
CIP Overheads	\$ 35,000	\$ 361,000
TOTAL	\$2,095,000	\$18,792,000

Funding Sources	FY 22/23 Revised Budget	Total Project Budget
Waste Water Capital Funds	\$2,094,000	\$14,092,000
DWR Grant Via NBWRA	-	\$ 4,700,000
TOTAL	\$2,094,000	\$18,792,000

The project is funded through the Wastewater Capital Funds account and DWR Grant via NBWRA.

This project will reduce routine maintenance, which will save costs. This is Phase 1 of an overall expansion project, which will eventually increase City revenue.

ALTERNATIVES

The project was satisfactorily completed by the contractor. Not accepting completion would likely lead to a contractual dispute with the contractor.

If the City Council does not approve the resolution, a revised resolution would be necessary to release the retention of payment due to the contractor for completing the work.

ATTACHMENTS

1. Resolution
2. Site Plan
3. Site Photos