DATE: April 17, 2023

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

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SUBJECT: Resolution Ratifying Award of Contract, Accepting the Completion of, and Authorizing Release of the 10% Retention for the Emergency Repair to the Ellis Creek Water Recycling Facility Oxidation Pond Levee and Transfer Structure by Team Ghilotti, Inc.

RECOMMENDATION

It is recommended that City Council adopt the attached Resolution Ratifying Award of Contract, Accepting the Completion of, and Authorizing Release of the 10% Retention for the Emergency Repair to the Ellis Creek Water Recycling Facility Oxidation Pond Levee and Transfer Structure by Team Ghilotti, Inc.

BACKGROUND

Ellis Creek Water Recycling Facility (ECWRF) utilizes ponds to store and treat the City's wastewater. The ponds are a critical part of the treatment process and are comprised of an aerated lagoon, eight oxidation ponds, and two treatment ponds. They were constructed in the 1970s by building levees to create a perimeter for each pond. Transfer structures are the inlet and outlet systems that interconnect the ponds. They control the flow of water from one pond to the next, providing operational flexibility. Each transfer structure consists of a concrete structure with inlet and outlet piping, a gate valve, and an overflow pipe. There are a total of fifteen transfer structures at all the ponds.

In December 2021, a sinkhole formed at the levee between the Aerated Lagoon and Oxidation Pond Four. The sinkhole was temporarily stabilized by placing riprap around the damaged area to prevent additional erosion. This provided time to assess the damage and develop a repair plan. The permanent repair of this sinkhole will be addressed as part of a new Capital Improvement Program (CIP) project. Because the pond transfer structures are at the end of their useful life, this CIP

project will both redesign and reconstruct all fifteen transfer structures as well as study the feasibility of increasing pond capacity. We anticipate that design and construction efforts for the CIP project will extend into the end of 2025. With the timeline of the CIP project in mind, staff determined that the sinkhole would need to be repaired before the project was complete. However, on January 3, 2023, a second sinkhole developed at the same location due to strong flows from multiple storm events. The sinkhole rapidly grew from approximately one foot in width to five feet over the course of a few days, placing the levee, road, and transfer structure between the Aerated Lagoon and Pond Four at risk of complete failure. The second sinkhole could not be stabilized and needed to be repaired immediately to continue pond operations. Staff acted quickly to declare this an emergency repair, which allows the City to execute a contract without going out to bid. Attached is a map and photographs showing the location and damage.

DISCUSSION

Public Contract Code Section 1102 defines an emergency as "a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services." Pursuant to Section 4.04.050 of the Petaluma Municipal Code bidding on construction projects is not required for emergencies. The rapid growth of the two sudden and unexpected sinkholes placed the levee, road, and transfer structure adjacent to the sinkholes in imminent danger and required the City to immediately act to mitigate the potential property loss and public services. As this was an emergency the City was able to dispense with its bidding requirements.

On January 5, 2023, the City issued an emergency purchase order to Team Ghilotti, Inc., to repair the failing levee and transfer structure where both sinkholes developed. The failing transfer structure mainly consists of a concrete structure with three 24-inch inlets, a 48-inch outlet, and a 24-inch overflow pipe. The cause of the sinkholes was a failed section of the 48-inch outlet pipe, which had corroded beyond repair. Therefore, the main objective of the emergency repair was to replace the 48-inch outlet pipe and restore the levee before a catastrophic failure occurred.

Due to the ongoing January 2023 storm event, plant operations needed to ensure that water could continue to flow out of the Aerated Lagoon into Pond 4. Team Ghilotti acquired and set up two pumps for flow to bypass the compromised transfer structure. Once the pumps were operating, the contractor installed sheet piles to dewater the site, and proceeded with excavation and replacing the 48-inch outlet pipe. The levee face was rebuilt, and a Class II aggregate base (C2AB) was added to the levee road to ensure it remains operable. Team Ghilotti worked through the weekend and the storm, and within a week, the transfer structure was back in operation.

As work was being performed onsite, the contractor and staff realized that additional modifications were required to perform a sufficient repair. The original plan was to reconnect the 24-inch-diameter overflow pipe to the new outlet pipe. However, because the existing 24-inch pipe was too corroded, a new 24-inch pipe was installed and connected directly to the new 48-inch outlet pipe. In addition, the contractor raised concerns about the new 48-inch outlet pipe lifting at the toe, due to the new pipe being made of a lighter material, which would in turn damage the levee and disrupt pond operations. Therefore, riprap was placed around the toe of the outlet pipe to prevent this uplift from occurring. Due to saturated soil conditions, C2AB was placed along the levee's

access road during this emergency work event in order to provide safe and reliable maintenance access for Ellis Creek staff.

Team Ghilotti satisfactorily completed the emergency work on February 6, 2023. Therefore, staff recommends that the City Council adopt the attached Resolution authorizing the award of a contract, accepting completion of, and releasing the 10% retention for the Emergency Repair to the Ellis Creek Oxidation Pond Levee and Transfer Structure Project.

PUBLIC OUTREACH

Due to the emergency nature of the work, public outreach was not performed prior to the work. This agenda item did, however, appear on the City's tentative agenda document on April 3, 2023, which was a publicly-noticed meeting.

COUNCIL GOAL ALIGNMENT

The work was not planned as part of a specific goal. However, this work was crucial to keep critical infrastructure in operation to treat the City's wastewater.

CLIMATE ACTION/SUSTAINABILITY EFFORTS

This work was needed to maintain the daily operations of the ECWRF. Operations need to be maintained to stay in compliance with the California Regional Water Quality Control Board San Francisco Bay Region.

ENVIRONMENTAL REVIEW

The emergency repair work is statutorily exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15301 (Existing Facilities). The repair work was done to repair a failed portion of the Ellis Creek Oxidation Pond levee, which was part of a previously certified Environmental Impact Report. Additionally, this work was done to repair and restore a damaged facility as a result of a disaster during a state of emergency and therefore is also exempt pursuant to CEQA Guidelines Section 15269 (Emergency Projects).

FINANCIAL IMPACTS

The cost of completing the emergency repair was included in the FY 22/23 CIP budget because staff was already planning to complete this repair. The January 2023 storm events forced this repair to occur sooner than originally planned. The table below summarizes the work performed and lists all costs to complete the emergency repair.

Emergency Repair Costs – ECWRF Levee and Transfer Structure Repair

Work Performed	**Cost**
Mobilize Equipment	$ 4,300
Install sheet piles, and rent and setup two bypass pumps	$ 96,000
Excavate outlet for transfer structure, install 60 feet of 48-inch HDPE pipe, and backfill the levee and road	$ 53,000
Installation of a 24" overflow pipe, placement of riprap, and backfill using Class II aggregate road base	$ 18,960
Remove sheet piles, bypass pumps, and restore road access	$ 25,300
Total Cost of Emergency Repair =	**$197,560**

ALTERNATIVES

The project was completed satisfactorily 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 emergency work.

ATTACHMENTS

1. Resolution
2. Overview Map
3. Photographs