

CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES

TO: BOARD OF PUBLIC UTILITIES

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CAPITAL PROJECTS ENGINEERING

SUBJECT: ADOPTION OF A MITIGATED NEGATIVE DECLARATION AND
MITIGATION MONITORING AND REPORTING PROGRAM, AND
APPROVAL OF PROJECTS FOR THE GEYSERS-DELTA POND
CONNECTION IMPROVEMENTS AND THE DELTA DIFFUSER
MAINTENANCE PROJECT

AGENDA ACTION: RESOLUTION

RECOMMENDATION

It is recommended by the Transportation and Public Works Department and the Water Department that the Board of Public Utilities, by resolution: 1) adopt the Mitigated Negative Declaration for the Geysers-Delta Pond Connection / Diffuser Improvements; 2) adopt the Mitigation Monitoring and Reporting Program; 3) approve the Geysers-Delta Connection Improvements project; 4) approve the Delta Pond Diffuser Maintenance project; and 5) direct staff to file a Notice of Determination.

EXECUTIVE SUMMARY

This proposed resolution will adopt the Mitigated Negative Declaration (MND), adopt the Mitigation Monitoring and Reporting Program (MMRP), and approve the Geysers-Delta Connection Improvements and the Delta Pond Diffuser Maintenance (collectively referred to as the Projects). The proposed resolution will also direct City staff to file a Notice of Determination for the Projects pursuant to the California Environmental Quality Act (CEQA) Guidelines.

BACKGROUND

Tertiary disinfected recycled water produced at the Laguna Treatment Plant (LTP) is stored in a series of ponds with a storage capacity of 1.45 billion gallons. One such pond is Delta Pond, which is operated and maintained as part of the Regional Water Reuse System. Delta Pond is both supplied by and supplies water to the recycled water piping network. When necessary, discharge of recycled water is conveyed from Delta Pond into Santa Rosa Creek

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near its confluence with the Laguna de Santa Rosa. The Projects consist of the Geysers-Delta Pond Connection Improvements project and the Delta Pond Diffuser Maintenance project (also referred to as the Diffuser Improvements Project in the MND) both of which are connected to Delta Pond. Due to their geographic proximity and interconnectivity, the Projects were discussed together in a single MND. Each project, however, is an independent project and will be presented as such herein.

Geysers-Delta Pond Connection Improvements

The Geysers 48-inch diameter pipeline conveys recycled water from LTP to the Geysers geothermal power facility. The existing connection and conveyance of water between the Geysers pipeline and Delta Pond is via a 33-inch diameter recycled water turnout, with approximately 500 linear feet of 33-inch diameter distribution pipeline reduced to approximately 130 linear feet of 12-inch diameter pipeline that discharges into a concrete inlet channel located at the pond's easterly embankment. This existing connection has a discharge capacity of approximately 4 million gallons per day (MGD), which has been deemed insufficient for LTP's current needs.

The purpose of the Geysers-Delta Pond Connection Improvements project is to increase LTP's capacity to divert recycled water from the Geysers pipeline to Delta Pond in the event that the recycled water piping network is compromised. The connection improvements will provide a conveyance capacity of 50 MGD, equal to the flow delivered when the Llano Pump Station serving the Geysers Pipeline is operating at full capacity.

The Geysers-Delta Connection Improvements project will include the installation of a new 24-inch diameter distribution pipeline, spillway facility, and energy dissipation system. The new distribution pipeline will be tied into the existing 33-inch section of pipeline and will generally traverse in parallel to the existing 12-inch pipeline before terminating into a new discharge structure. The new spillway facility would be built immediately south of the existing facility.

The existing 12-inch pipeline and spillway facility will remain in place and will continue to serve as a discharge facility during construction of the project and for long-term use to accommodate small flow rates (4 MGD or less) post construction.

Delta Pond Diffuser Maintenance

The Delta Pond Diffuser (Diffuser) serves as the City of Santa Rosa's primary discharge facility for conveying recycled water from Delta Pond to the Russian River. Originally constructed in 2010, the Diffuser was installed in Santa Rosa Creek which is a natural tributary to the Russian River. The facility extends beyond the centerline of Santa Rosa Creek, and is comprised of a 48-inch pipe with an array of 24-inch duckbill check valves installed above the channel bottom to maximize mixing, reduce channel scouring, and minimize creek flow turbulence and overall impacts to navigation.

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Since the Diffuser's installation, the City has completed surveys and diver inspections to monitor changes in the channel bottom near the Diffuser. As is common in fluvial environments, the gravel and sediment bars in Santa Rosa Creek tend to move based on hydrologic and hydraulic conditions each year. These bars may not necessarily move downstream; instead, they may just spread, shift, or build over time. Over the winter season, the occurrence or lack of multiple large flow events can have a significant effect on the amount of material transported from or deposited around the Diffuser. It is expected that the channel in and around the Diffuser would experience sediment accumulation in some years, and sediment scouring in other years, resulting in minor changes in channel bottom elevations annually, but potentially by a few feet over time. Infrequent use of the Diffuser may exacerbate the impacts of natural sediment accumulation. When in use, it is expected that the Diffuser will mobilize small amounts of settled sediment. However, because LTP's recycled water supply typically goes to beneficial use, the Diffuser may go unused for several years. In recent years, accumulated sediment has been observed fully encompassing the existing duckbill check valves, impeding the discharge capacity of the facility.

In 2019, Kennedy Jenks prepared the Evaluation of Potential Modifications for Delta Discharge Study, which assessed different alternatives to address the sediment accumulation issue at the existing Diffuser facility. The study evaluated the following five alternatives:

- Alternative 1 - Rotating Nozzles; comprised of rotating the existing check valves 90 degrees to minimize flow obstruction and thus minimize sediment accumulation;
- Alternative 2 - Extending Nozzles; comprised of inserting a pipe between the manifold and check valves to increase the height of the nozzles above current sediment levels;
- Alternative 3 - Hydraulic Sparging; comprised of installing additional smaller manifold and ancillary check valves adjacent to and below the existing facility to mobilize accumulated sediment;
- Alternative 4 - Air Sparging; comprised of installing a new facility to supply high pressure air below and in front of the existing facility to mobilize accumulated sediment;
- Alternative 5 - Relocation of High-Pressure Fittings; comprised of reconfiguring the layout of the existing check valves, resulting in more even flow patterns of the water discharged from existing facility.

All alternatives were evaluated with consideration of constructability, regulatory implications, cost, operations and maintenance, and anticipated effectiveness. The study concluded with the following evaluations:

- Alternatives 1 & 2; the check valves would be located closer to the water surface, increasing the likelihood of trapping debris and impeding recreational waterway navigation; it is anticipated that these issues could significantly delay permitting;

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- Alternative 3; high risk that the sparging assembly itself may become buried in sediment. Routine manual sparging would also be required, which could deplete Delta Pond storage. Water quality analyses would be required since the sparging unit would discharge recycled water at a higher flow rate than the existing Diffuser;
- Alternative 4, Air Sparging; efficacy is largely unproven and would require significant effort in hydraulic modeling to evaluate the anticipated effectiveness;
- Alternative 5, Relocation of High-Pressure Fittings; should the Diffuser go unused for prolonged periods of time, sediment accumulation will continue to occur.

To the extent each of the alternatives posed regulatory and/or efficacy issues, staff determined that the accumulated sediment should be removed by routine dredging operations. As such, no improvements to the facility are proposed and the project is considered maintenance. The proposed means for removing accumulated sediment surrounding the Diffuser will be a combination of mechanical and hydraulic dredging techniques. Mechanical dredging will be completed with a long-reach excavator not directly adjacent to the Diffuser, providing means for removing large quantities of sediment. Hydraulic dredging will be completed within the direct vicinity and adjacent to the Diffuser by deployed divers performing vacuum pumping operations of sediment material. It is anticipated hydraulic dredging will require more time to remove a given volume of sediment but will significantly reduce the risk of damaging the Diffuser facility that would not be otherwise visible via mechanical dredging operations.

An important consideration in the dredging efforts is sediment management. As part of the dredging operations, a “U”-shaped turbidity containment curtain will be installed in the creek around the area to be dredged to prevent disturbed sediment from being transported downstream. Material removed using hydraulic dredging will be pumped into a drying laydown area and undergo a decanting processing. Dried material from this process as well as the material removed using mechanical dredging will be removed from the site and disposed of at an approved location.

Dredging will be periodically required for the foreseeable future. Because sediment levels are a function of hydrologic and hydraulic conditions, as well as when and how often the Diffuser facility is used, the frequency at which dredging will need to occur is not known. After the first instance of dredging, the LTP staff will continue to survey and monitor sediment levels. When sediment levels appear to impede the Diffuser’s discharge abilities, staff will implement subsequent Diffuser maintenance public contracts. It is anticipated that the mitigation measures developed in the MND will be adequate to mitigate potential impacts in future dredging efforts.

California Environmental Quality Act Compliance for the Projects

In November 2021, an Initial Study/Proposed Mitigated Negative Declaration (IS/MND) was completed by AES-Montrose, of Sacramento, for both the Geyser-Delta Connection Improvements and the Delta Pond Diffuser Maintenance projects, to satisfy the

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requirements of the California Environmental Quality Act (CEQA). The IS/MND further describes why the projects are being proposed and the potential impacts to the environment. The document identified that with the inclusion of specific environmental protection actions and mitigations measures as detailed in the MMRP, potential impacts to air quality, biological resources, cultural resources, hazards/hazardous materials, noise, and hydrology & water quality could be reduced to a level considered to be less than significant. The following project-specific monitoring actions were identified to be implemented prior to and during construction of the proposed project:

- a qualified biologist shall conduct a preconstruction protocol-level survey to determine the presence of special status plants, and bird nesting assessment survey prior if construction activities occur during nesting season;
- dredging activities must be conducted outside of the known salmonid fall and winter runs, between November to February;
- installation of a "U"-shaped turbidity curtain fully surrounding the dredging area to prevent fish from entering the dredge area and prevent silt from the leaving the immediate area until it settles;
- a qualified biological monitor shall be present during the installation of the sediment curtain to ensure that any fish or other aquatic species are not harmed;
- a hydrologic and hydraulic analysis must be performed prior to the start of development and must demonstrate that the development would not cause any rise in base flood levels.

In accordance with Assembly Bill 52 and CEQA guidelines, project notification letters were sent to nine tribes in the area, including the Lytton Rancheria of California and the Federated Indians of Graton Rancheria. Lytton Rancheria acknowledged receipt of the consultation request and confirmed that no further consultation was required. The Federated Indians of Graton Rancheria requested consultation on alternatives to the projects, recommended mitigation measures, and significant effects of the projects. The Federated Indians of Graton Rancheria reviewed and provided comments on mitigation measures in the Draft IS/MND. While none of the in-pond improvements along the eastern portion of Delta Pond would impact intact cultural resources, trenching and underground work outside the pond for the Geysers-Delta Connection Improvements, temporarily upgrading the existing gravel access road from Willowside Road to Delta Pond, and vegetation clearing by Santa Rosa Creek may uncover archaeological resources. To address this concern, the following mitigation measures were included in the MMRP:

- a qualified professional archeologist and Native American monitor shall be retained to monitor ground-disturbing work associated with the Geysers-Delta Pond Connection Improvements, as well as any work associated with the access road, and clearing for machinery needed to remove sediment near the Diffuser;
- work shall halt within 50 feet if human remains are uncovered during construction, the significance of the find shall be assessed, and the appropriate management shall be pursued.

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A Tribal Monitoring Agreement with the Federated Indians of Graton Rancheria is currently being drafted.

The IS/MND was issued for public notice and review for 30 days, beginning May 26, 2021 and ending on June 24, 2021. A Notice of Intent to adopt the MND was published in the Press Democrat on May 26, 2021, in accordance with CEQA requirements. IS/MND documents were submitted to the State Clearinghouse for a 30-day public review period and for distribution to pertinent state agencies. The IS/MND was sent to local resource agencies and other responsible and trustee agencies and posted on the City's Transportation & Public Works Department website. Noticing exceeded CEQA requirements.

Comments were received from California Department of Fish and Wildlife (CDFW) and the Federal Emergency Management Agency (FEMA). Both letters are appended to the Response to Comments (attached). The CDFW comment letter provides comments concerning potential impacts to fish, plant, and wildlife resources pursuant to CEQA Guidelines Section 15386. CDFW requested additional information or additions/revisions to the mitigation measures. Additional information was provided, and mitigation measures were revised to address CDFW comments. The FEMA letter provides comments concerning whether or not the projects would result in a rise of base flood elevation levels caused by new development. An additional mitigation measure was added that requires a hydrologic and hydraulic analysis that demonstrates the projects would not cause any rise in base flood levels. No new, avoidable significant effect was identified from the comments. Additions or revisions to the requested analysis and mitigation measures/project revisions are consistent with the findings of the IS/MND.

PRIOR BOARD OF PUBLIC UTILITIES REVIEW

N/A

ANALYSIS

This proposed action will adopt the MND and the MMRP and approve the Geysers-Delta Connection Improvements project and the Delta Pond Diffuser Maintenance project, which are evaluated as separate components of a single Project in the MND.

The IS/MND identified that with the inclusion of specific environmental protection actions, mitigation measures, and monitoring actions as part of the projects, potential impacts could be reduced to less than significant and the projects will not have a significant effect on the environment.

Upon adoption of the MND and MMRP, and approval of the projects by the Board, a Notice of Determination (NOD) will be filed with the Sonoma County Clerk's Office and the State Clearinghouse, completing the environmental review process for the projects.

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FISCAL IMPACT

Funds for this project have been appropriated with the Subregional Wastewater Capital Fund. Any future funds, if or when needed, will be appropriated as part of the Subregional Wastewater Capital Fund.

ENVIRONMENTAL IMPACT

Pursuant to CEQA, an IS/MND was prepared for the project and circulated for 30 days starting on May 26, 2021. A Notice of Intent to adopt an MND was published in the Press Democrat and posted in accordance with the CEQA requirements on May 26, 2021. Comments were received from the California Department of Fish and Wildlife and the Federal Emergency Management Agency. As demonstrated in the Response to Comments, the IS/MND as noticed remains sufficient to adequately evaluate the environmental effects of the Project and none of the conditions outlined within Section 15073.5 of the CEQA Guidelines requiring recirculation of the MND were met.

BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

Not applicable.

ATTACHMENTS

- Attachment 1 – Initial Study / Mitigated Negative Declaration
- Attachment 2 - Response to Comments
- Attachment 3 - Final MMRP
- Resolution

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