RECOMMENDATION

Approve a Resolution (Attachment A) authorizing the use of $250,000 from Water Fund Unreserved Working Capital to increase the available construction contingency for the completion of the Disinfection Byproduct Reduction and Pipe Gallery Improvements Project, Specification No. 1000044.

DISCUSSION

Background – Existing Approved Water Quality Project
To enable the City of San Luis Obispo (City) to maintain water quality regulatory compliance related to disinfection byproduct levels and address the corrosion issues within the pipe gallery, the City Council approved advertisement of the Disinfection Byproduct Reduction (DBR) and Water Treatment Plant (WTP) Pipe Gallery Improvements Project (Project) on October 22, 2019 (Attachment B). The Engineer’s Estimate for the project was $1,817,000. The Project contingency was budgeted at 25 percent due to the complexity of the proposed pipe gallery improvements and consequence of failure. Total Project costs were $2,674,250 which included $516,750 for construction and construction management contingencies.

The award of the Project was approved by the City Manager Report (Attachment C) on November 18, 2019 with a construction contract totaling $1,990,700. Because the bid exceeded the Engineer’s Estimate, $173,700 of available project contingencies were utilized to make up the difference.

Project Site Challenges and Need for Increased Contingencies
Construction began on December 7, 2019. Since then, the Project has encountered unforeseen changed site conditions (unexpected rock and concrete removal) and other operational challenges resulting in the construction of a treated water flow bypass required to sustain prolonged WTP shutdowns. To ensure adequate funding is available for the completion of the Project, staff is recommending the City Council approve an increase to the Project construction contingency in the amount of $250,000 from Water Fund, Unreserved Working Capital (Attachment D).
Previous Council or Advisory Body Actions
The City Council approved advertisement of the Project on October 22, 2019. Consistent with Council direction, the award of the Project was approved by the City Manager Report on November 18, 2019.

Policy Context
The U.S. Environmental Protection Agency and the State Water Resources Control Board prescribe regulations that limit certain contaminants in water provided by public water systems, including disinfection byproducts, specifically total trihalomethanes, or TTHMs.

Consistent with the General Plan, Water and Wastewater Management Element, Policy A2.2.1, the City utilizes multiple water resources to meet its water supply needs. Operationally, this means the City uses a blend of water sources to meet the community’s water needs – from Salinas, Whale Rock, and Nacimiento Reservoirs.

Public Engagement
The City posts its Water Quality Consumer Confidence Report (Water Quality Report) annually on the City’s webpage and mails a printed copy to all customers. Public water systems are required by state and federal law to notify users of any exceedance of any water quality standard and any other noncompliance events affecting their water system.

CONCURRENCE

Public Works staff concurs with this request.

ENVIRONMENTAL REVIEW

This project is exempt from the California Environmental Quality Act (CEQA) per categorical exemption 15301(b), Existing Facilities. The Community Development Department issued a Notice of Exemption on September 9, 2019.

FISCAL IMPACT

Budgeted: Yes  Budget Year: FY 19-20
Funding Identified: Yes

Fiscal Analysis:

<table>
<thead>
<tr>
<th>Funding Sources</th>
<th>Current FY Available Budget</th>
<th>Annualized On-going Cost</th>
<th>Total Project Cost</th>
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<tr>
<td>General Fund</td>
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<td>Fees</td>
<td></td>
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<tr>
<td>Other: Water Fund</td>
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<tr>
<td>Total</td>
<td>$2,674,250</td>
<td>0</td>
<td>$2,924,250</td>
</tr>
</tbody>
</table>
Staff recommends increasing the construction contingencies for the Project in the amount of $250,000, thereby increasing the total project budget from $2,674,250 to $2,924,250. Water Fund Unreserved Working Capital has an available balance of over $14 million to accommodate the recommendation.

**ALTERNATIVE**

*Do not approve the Resolution.* The Council may elect not to approve the Resolution authorizing additional contingency; however, staff does not recommend this alternative as limited contingency is available for project completion.

**Attachments:**

a - Draft Resolution  
b - Council Agenda Report from October 22, 2019  
c - Council Agenda Report from November 15, 2019  
d - Budget Amendment Request Form
RESOLUTION NO. _____ (2020 SERIES)

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAN LUIS OBISEP, CALIFORNIA, AUTHORIZING USE OF WATER FUND UNRESERVED WORKING CAPITAL TO INCREASE CONSTRUCTION CONTINGENCIES FOR THE DISINFECTION BYPRODUCT REDUCTION AND WATER TREATMENT PLANT PIPE GALLERY IMPROVEMENTS PROJECT, SPECIFICATION NO. 1000044

WHEREAS, to ensure that water is safe to drink, the U.S. Environmental Protection Agency and the State Water Resources Control Board prescribe regulations that limit certain contaminants in water provided by public water systems, including total trihalomethanes, or TTHMs; and

WHEREAS, the City’s 2015 Potable Water Distribution System Operations Master Plan was approved by the City Council in 2016. The Master Plan discussed the challenges in meeting Stage 2 disinfection byproducts water quality regulations associated with tank turnover and water age; and

WHEREAS, on March 19, 2019, the City Council approved a budget of $1,850,000 for the Water Treatment Plant (WTP) and Water Distribution System Disinfection Byproduct Reduction Project (Project); and

WHEREAS, in June 2019, the City Council approved 2019-21 Financial Plan, Capital Improvement Program, identified a total Project budget of $1,850,000; and

WHEREAS, on July 8, 2019, the City Manager approved an amendment to the design scope of the Project to include improvements to the WTP pipe gallery in response to severe pipe corrosion and the high consequence of failure; and

WHEREAS, on October 22, 2019, the City Council approved a total Project budget of $2,674,250 for Project construction; and

WHEREAS, on November 18, 2019 the City Manager approved the award of the Project with a construction contract totaling $1,990,700 utilizing 173,700 of available contingencies; and

WHEREAS, to ensure adequate funding is available for completion of the Project, staff is recommending the City Council approve use of $250,000 from Water Fund, Unreserved Working Capital; and

WHEREAS, a balance of approximately $14 million is available from Water Fund, Unreserved Working Capital to fund the Project.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of San Luis Obispo as follows:

R _____

Packet Page 120
SECTION 1. The City Council authorizes staff to transfer $250,000 from the Water Fund, Unreserved Working Capital to the Disinfection Byproduct Reduction and Water Treatment Plant Pipe Gallery Improvements Project, Specification No. 1000044, as it is a high priority City project as shown in the attached Budget Amendment Request (Exhibit A).

SECTION 2. Environmental Review. Construction of this project is exempt from the California Environmental Quality Act (CEQA) per categorical exemption 15301(b), Existing Facilities. The Community Development Department issued a Notice of Exemption on September 9, 2019.

Upon motion of ____________________, seconded by ____________________, and on the following roll call vote:

AYES: 
NOES: 
ABSENT: 

The foregoing resolution was adopted this _____ day of ___________________ 2020.

____________________________________
Mayor Heidi Harmon

ATTEST:

____________________________________
Teresa Purrington
City Clerk

APPROVED AS TO FORM:

____________________________________
J. Christine Dietrick
City Attorney

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the City of San Luis Obispo, California, this __________ day of ________________________, 2020.

____________________________________
Teresa Purrington
City Clerk
FROM: Aaron Floyd, Utilities Director
Prepared By: Mychal Boerman, Deputy Director Utilities/Water
Jennifer Metz, Utilities Project Manager

SUBJECT: AUTHORIZE ADVERTISEMENT OF DISINFECTION BYPRODUCT REDUCTION AND WATER TREATMENT PLANT PIPE GALLERY IMPROVEMENTS PROJECT, SPECIFICATION NO. 1000044

RECOMMENDATION

1. Approve the plans (Attachment A) and specifications (Council Reading File, Attachment B) for the Disinfection Byproduct Reduction and Water Treatment Plant Pipe Gallery Improvements Project (Project), Specification No. 1000044; and
2. Authorize staff to advertise the Project for bids; and
3. Authorize the City Manager to award the construction contract for the Project if the lowest responsible bid is within available project funding; and
4. Approve a Resolution (Attachment C) authorizing a budget transfer of $1,042,174, from Water Fund, Unreserved Working Capital account to the Project account.

DISCUSSION

Background

Disinfection Byproduct Reduction
The City’s Water Treatment Plant (WTP) meets the community’s daily water demands using a combination of surface water sources that include Whale Rock, Salinas (Santa Margarita Lake), and Nacimiento Reservoirs. Following the initial treatment processes, chlorine is added to the water before distribution to the community to prevent any harmful microbial regrowth from occurring. Water systems that use chlorine for this type of disinfection are required by federal and state law to sample for disinfection byproducts on a regular basis at specific locations. Total Trihalomethanes (TTHMs) are a group of substances known as disinfection byproducts which form when chlorine reacts with naturally occurring organic material in water. The highest levels of TTHMs typically occur where water age is the greatest, such as in water tanks with poor mixing. United States Environmental Protection Agency (EPA) regulatory requirements for maximum TTHM contaminant levels became more stringent in 2013 due to elevated concerns that there may be associated health risks with prolonged ingestion.

Following the more stringent EPA regulations, the City’s water sample results for the 2nd quarter of 2015 showed TTHMs at levels of 82.1 parts per billion (ppb) which was above the maximum contaminant level (MCL) of 80 ppb. When routine monitoring indicated that TTHM levels were above regulatory standards, the City issued a notice to customers to keep them informed about
water quality. Since that time, WTP staff has been blending water from the various surface water reservoirs to reduce naturally occurring organics and to optimize treatment performance along with making operational adjustments to reduce water age within the City’s water distribution system to minimize TTHM formation. WTP staff also pilot tested different chemicals aimed at reducing TTHM levels without success. The City’s Water Distribution staff also implemented a flushing program to help move the aging water throughout the system. Over the last few years, the City’s third quarter (late summer) TTHM readings are nearing the MCL exceedance levels. This upward trend in TTHMs is exacerbated by the warmer water temperatures in the source water supplies during summer, water conservation which results in longer contact time with chlorine, and the City’s water resiliency supply strategy that requires using minimal water from Whale Rock Reservoir, even though it is the lowest in organic material. In order to permanently address the issue of high TTHMs, mixing, aeration, and ventilation equipment is needed at two of the City’s water storage tanks.

Water Treatment Plant Pipe Gallery
The City’s existing WTP was constructed at its current Stenner Canyon location in 1963, with major facility upgrades in 1994 and 2009. Upon inspection in early 2019, staff identified portions of the WTP pipe gallery (installed as part of the 1994 upgrade) that exhibited severe corrosion. Specifically, a section of the 30-inch filter effluent line that delivers treated water to the clearwell tanks where it is stored prior to entering the water distribution system. At this location, chemical treatment is required for fluoride and chlorine addition and pH adjustment. It is assumed that this chemical addition, combined with the presence of standing groundwater, contributed to the severe corrosion of the pipe. Due to the high consequence of failure of the pipeline, staff is recommending the urgent replacement of the corroded piping.

Project
To enable the City to maintain regulatory compliance related to disinfection byproduct levels and address the corrosion issues at the pipe gallery, staff is recommending the City Council approve the Disinfection Byproduct Reduction (DBR) and WTP Pipe Gallery Improvements Project (Project) and authorize advertisement of the project.

The Project includes two components: WTP pipe gallery improvements and disinfection byproduct reduction equipment installation at the WTP (Clearwell 2) and at Edna Saddle Tank. The City completed plans and specifications (Attachments A and B) for the Project and recommends the City Council authorize advertisement of the project for construction. Combining the two components allows the City to achieve construction efficiencies to expedite project completion and minimizes the duration of construction impacts on WTP operations.
The Project includes modifications at two potable water storage tanks (Clearwell #2 at the WTP and Edna Saddle Tank) for the installation of specialty equipment (mixers, aerators, and ventilators) to effectively reduce disinfection byproducts to meet regulatory requirements. As part of the approval on March 19, 2019 (Attachment D), Council authorized the inclusion of the sole-sourced equipment in the Project’s bid documents (PAX Trihalomethane Reduction System by PSI Water Technologies, Inc.).

The Project also includes replacement of corroded pipe within the pipe gallery at the WTP, installation of a new effluent line and additional valving to provide a means for improved maintenance flexibility within the pipe gallery, and the abandonment of a portion of the existing buried 30-inch pipeline. This construction will be complex as the existing WTP must continue to operate and serve the community’s water needs, allowing only short duration shutdowns to not interrupt water service. The project requires significant excavation work to enable the new pipeline installation, and space is limited.

The Project contingency for construction, construction management, and inspection services is budgeted at 25 percent due to the complexity of the proposed pipe gallery improvements and consequence of failure. Construction management and inspection services will be provided by consultants from the City’s on-call service contracts, Capital Plan Construction Management Services, Specification No. 50410.2018CM and Water and Wastewater Engineering Services, Specification No. 91537.

Policy Context
The U.S. Environmental Protection Agency and the State Water Resources Control Board prescribe regulations that limit certain contaminants in water provided by public water systems, including disinfection byproducts, specifically total trihalomethanes, or TTHMs.

Consistent with the General Plan, Water and Wastewater Management Element, Policy A2.2.1, the City utilizes multiple water resources to meet its water supply needs. Operationally, this means the City uses a blend of water sources to meet the community’s water needs – from Salinas, Whale Rock, and Nacimiento Reservoirs.

Previous Council Action
On March 19, 2019, the City Council approved the budget for the Water Treatment Plant and Water Distribution System DBR project (Attachment D). The City Manager approved an amendment to the design scope of the Project on July 8, 2019 to include improvements to the WTP pipe gallery in response to severe pipe corrosion and the high consequence of failure that could occur from a leak in this pipeline (Attachment E).

The City’s 2015 Potable Water Distribution System Operations Master Plan was approved by the City Council in 2016. The Master Plan discussed the challenges in meeting Stage 2 disinfection byproducts water quality regulations associated with tank turnover and water age that this Project
Public Engagement
The City posts its Water Quality Consumer Confidence Report (Water Quality Report) annually on the City’s webpage and mails a printed copy to all customers. Public water systems are required by state and federal law to notify users of any exceedance of any water quality standard and any other noncompliance events affecting their water system. In 2015, when a violation occurred, the City sent out a Public Notice of Violation. The City has not had a violation since the occurrence in 2015.

CONCURRENCES
Utilities and Public Works Department staff (City Engineer and Construction Manager) met to review delivery options for the Project. Public Works staff concurs with this request.

ENVIRONMENTAL REVIEW
This project is exempt from the California Environmental Quality Act (CEQA) per categorical exemption 15301(b), Existing Facilities. The Community Development Department issued a Notice of Exemption on September 9, 2019 (Attachment F).

FISCAL IMPACT

Budgeted: No
Budget Year: 2019-20
Funding Identified: Yes

The DBR improvements were described in the 2019-21 Financial Plan, Capital Improvement Program, on page 397, with a total project budget of $1,850,000. The severity of the corrosion at the WTP pipe gallery was unknown at the time projects were prioritized for the Capital Improvement Program. Of the available budget for the Project, $217,924 was expended for design services (Attachments D and E), and $1,632,076 is remaining for construction, contingencies, and construction management/inspection services. Contingencies are included at 25 percent of the construction and construction management/inspection budget to address potential changes in scope that may arise during construction. This is a higher rate of contingency to typical pipeline replacement capital projects due to the complexity of the pipe gallery construction within the WTP.

The construction cost estimate for the project is $1,842,000, including the shop drawing cost from PSI Water Technologies. Other project costs are outlined in the table below for a total project cost of $2,674,250. As described in the Resolution (Attachment C), a budget transfer of $1,042,174 is proposed from Water Fund, Unreserved Working Capital which is approximately $20 million (unaudited financials). Since sufficient unreserved working capital is available to support this project, staff does not recommend modifications to the approved 2019-21 capital project program.
Disinfection Byproduct Reduction and Water Treatment Plant Pipe Gallery Improvements Project (Specification #1000044)

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<tr>
<th>Estimated Costs</th>
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<td>Construction Management (CM)/Inspection</td>
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<tr>
<td>Specialized Coatings Inspection</td>
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<tr>
<td>Engineering Construction Phase Support</td>
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<td>Shop Drawings</td>
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Project Funding

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<tbody>
<tr>
<td>Total Funding Available</td>
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<td>Funding from Water Fund, Unreserved Working Capital</td>
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<td><strong>Available Project Funding</strong></td>
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Fiscal Analysis:

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<tr>
<th>Funding Sources</th>
<th>Current FY Cost</th>
<th>Annualized On-going Cost</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund</td>
<td></td>
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<tr>
<td>Fees</td>
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<td>$2,804,250</td>
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Ongoing annual costs are estimated at $130,000 for the operation of the DBR equipment. Funding for the Project’s on-going operational costs was approved as part of the 2019-2021 Financial Plan in the WTP operating budget.

ALTERNATIVES

Deny or defer approval to advertise. The City Council may choose to deny or defer the approval to advertise this project. Staff does not recommend this alternative as the City is required to remain in regulatory compliance of the Disinfection Byproduct Rule. Should this be denied or deferred, the existing WTP pipe gallery pipeline will also continue to deteriorate, increasing the likelihood of failure.

---

1 Excludes operating costs.
November 15, 2019

FROM: Aaron Floyd, Utilities Director  AF  11/14/19
PREPARED BY: Mychal Boerman, Deputy Director – Water
Jennifer Metz, Utilities Project Manager
SUBJECT: Award of Disinfection Byproduct Reduction and Water Treatment Plant Pipe Gallery Improvements Project, Specification No. 1000044

RECOMMENDATION

Award a contract to Cushman Contracting Corporation. the amount of $1,990,700 for the construction of the Disinfection Byproduct Reduction and Water Treatment Plant Pipe Gallery Improvements Project, Specification No. 1000044 (Project).

DISCUSSION

On October 22, 2019, the City Council approved plans and specifications, authorized staff to advertise for bids, and authorized the City Manager to award the construction contract if the lowest responsible bid is within available Project funding (Attachment 1). The construction cost estimate was $1,817,000 and contingency of $516,750 was identified for a total available budget of $2,333,750.

On October 30, staff held a mandatory pre-bid meeting for the Project that was attended by six contractors. Bids were opened on November 14, 2019 and Cushman Contracting Corporation was the low bidder with a proposal of $1,990,700 which is lower than the total available budget of $2,333,750.

It is recommended that the Project be awarded to Cushman Contracting, Inc. The Contractor’s references, license and registration with the Department of Industrial Relations have been verified. A bid summary is provided in Attachment 2.

CONCURRENCES

The Public Works Department concurs with the recommended action.
FISCAL IMPACT

The proposed budget is shown below. After completion, the budget savings will be moved to the Water Fund’s Completed Projects account.

*Fiscal Impact Summary*

<table>
<thead>
<tr>
<th>Costs By Type</th>
<th>Item</th>
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<th>Change</th>
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<thead>
<tr>
<th>Funding By Source</th>
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<tr>
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<td>$343,050.00</td>
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<td><strong>Total</strong></td>
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<td>$343,050.00</td>
<td>$1,990,700.00</td>
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</table>

**ALTERNATIVES**

**Deny award of the contract.** The City Manager may choose to not award the contract and reject all bids. Staff does not recommend this alternative. Delay of improvements could result in the Water Treatment Plant being offline for unplanned repairs.

**ATTACHMENTS**

1. Council Agenda Report, October 22, 2019
2. Bid Summary
3. Contract Agreement, Cushman Contracting Corporation
# BUDGET AMENDMENT REQUEST

**Department**
- Utilities

**Fiscal Officer**
- Kelley Mattos

**Department Head**
- Aaron Floyd

**PURPOSE**

Use of unreserved working capital to increase construction contingencies for the disinfection byproduct reduction and water treatment plant pipe gallery improvements project, specification no. 10000444.

## REVENUES AND TRANSFERS IN

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## EXPENDITURES AND TRANSFERS OUT

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## PROJECTS AND AWARDS

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|                  |       |         |      |         |
|                  |       |         |      | 250,000.00 |

## CHANGE TO FUND BALANCE, WORKING CAPITAL OR DESIGNATION

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|                  |       |             |         |             |
|                  |       |             |         | (250,000.00) |

**Accounting**
- Date

**Budget Manager or Finance Director**
- Date

**Posted By**
- Process ID
- Date
- Period
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