



AGENDA MEMORANDUM

Action Item for the City Council Meeting of May 14, 2024

DATE: May 14, 2024

TO: Peter Zaroni, City Manager

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Mary Rhodes Pipeline Phase 2 System Improvements
Feasibility Study Cost-Share Agreement with the U.S. Army Corps of Engineers

CAPTION:

Motion authorizing a cost-share agreement with the U.S. Army Corps of Engineers (USACE) for design and construction to address streambank erosion control related to the Mary Rhodes Pipeline Phase 2 System Improvements project, located in the vicinity of the Mary Rhodes Pump Station near Bay City, in an amount not to exceed \$4,629,100, with FY 2024 funding available from the Water Capital Fund and funding in the amount of \$8,596,900 available from the USACE. The total projected cost for the streambank erosion improvement is estimated to be approximately \$13,676,000, including phase one feasibility study.

SUMMARY:

This motion authorizes a cost-share agreement with the USACE for design and construction for streambank erosion control related to the Mary Rhodes Pipeline Phase 2 System Improvements project.

The USACE will design and construct a stream bank erosion system that will protect the Mary Rhodes Pump Station from imminent threats along the portion of the Colorado River in the vicinity of the intake structure.

BACKGROUND AND FINDINGS:

In the 1990's the City of Corpus Christi was experiencing water shortages and former Mayor Mary Rhodes led an initiative to secure water rights from the Colorado River to provide for an additional water source to residents, businesses, and industries. Mayor Rhodes' initiative led to the development of the Mary Rhodes Pipeline. The pipeline consists of Phases 1 and 2. Phase 1 was constructed in 1998 and includes a 101-mile-long pipeline and several pump stations that transfer water from Lake Texana to the O.N. Stevens Water Treatment Plant.

Phase 2 construction started in 2014 and includes a 42-mile-long pipeline that has two pump stations and a sedimentation basin that starts at the Colorado River near Bay City, connecting to Phase 1 of the pipeline at Lake Texana.

Following Hurricane Harvey and subsequent major rain events, portions of the riverbank along the Colorado River that are adjacent to the Mary Rhodes Pipeline Phase 2 water intake structure and pump station have experienced significant streambank erosion. In 2018, the City retained the Engineering firm Freese and Nichols, Inc. (FNI). to prepare a technical memorandum to assess the erosion at the riverbank, develop preliminary recommendations to repair and restore the riverbank and to prevent further threats to the Mary Rhodes Pipeline Phase 2 water intake structure and pump station. The report prepared by FNI was provided to U.S. Army Corps of Engineers (USACE) to request for funding assistance for the project. In their assessment, FNI indicated that the erosional process on the river has caused the streambank to recede approximately 10 to 12 feet and that it is approximately 15 to 40 feet from the pertinent structures of the intake structure, pump station, and sedimentation basins in various locations along the project area. Moreover, the erosion has compromised certain land structures, such as the pump station, alert warning infrastructure, power lines, and the sedimentation basin.

Due to the escalating degradation of the area adjacent to the pump station (0.45 miles in length), the City proactively requested assistance from the USACE, in partnership with the City, to further investigate the issue and determine solutions for needed repairs under its Emergency Streambank and Shoreline Protection – Continuing Authorities Program (CAP). CAP authorizes the USACE to plan, design, and construct projects to assist local governments by investigating potential water resource issues.

A CAP project is conducted in two stages: (1) a feasibility study, and (2) design and implementation (construction). Both stages of a CAP project are cost-shared between the federal government and the local government.

On March 30, 2021, the City Council approved the cost-share agreement with the USACE to conduct the feasibility study for stream bank erosion at the Mary Rhodes Phase II pump station. As per the cost-share agreement, The USACE contributed the first \$100,000 and the remaining costs were cost-shared 50/50. The City and the USACE both contributed an additional \$92,500 each.

On March 29, 2022, The USACE requested additional funding in the amount of \$82,500 to complete the feasibility study. The City Council approved the additional funding request during the May 24, 2022, Council meeting. The USACE also contributed \$82,500. The City's total contribution was \$175,000 and the total cost-share for the first stage was \$450,000.

The USACE completed the stage 1 feasibility study in 2023 and determined that the project could be accomplished through the USACE CAP program. The CAP's second stage will require the City to cost-share 35% of design and construction costs and the USACE will provide 65%. In 2023, the funding cap was raised from \$5,000,000 to \$10,000,000. The cost estimate for stage 2 - design and implementation was determined to be the following:

Design: USACE \$796,900 and City \$429,100.

The construction portion of the project will be USACE \$7,800,000, and City \$4,200,000.

The Federal costs associated with planning, design and construction may not exceed \$10,000,000.

This agenda item will authorize the City to enter into the cost-share agreement with the USACE for the second stage (design and construction), of the project.

PROJECT TIMELINE:

After City Council approval, the design, construction, and close-out will take approximately 2 years.

ALTERNATIVES:

An alternative is to not proceed with the cost-share agreement for the feasibility study with the U.S. Army Corps of Engineers, which will allow the erosion to continue along the Colorado Riverbank and remain an imminent threat to the Mary Rhodes Pump Station and intake structure.

FISCAL IMPACT:

This fiscal impact for FY 2024 is an amount of \$4,629,100, with funding available from the Water Capital Fund.

FUNDING DETAIL:

This project is listed in the FY 2024 Capital Improvement Program.

Fund: Water 2015 MRP2 (Fund 4095)
Mission Elem: Water Distribution (041)
Project: Mary Rhodes Pipeline Phase 2 System Improvements (19025A): Please
reference project 20105A in the FY 2024-2025 Capital Budget.
Account: Outside Consultants (550950)
Activity: 19025-A 4095-EXP
Amount \$4,629,100

RECOMMENDATION:

Staff recommends approval of the motion authorizing a cost-share agreement with the U.S. Army Corps of Engineers to design and construct streambank erosion control related to the Mary Rhodes Pipeline Phase 2 System Improvements project.

LIST OF SUPPORTING DOCUMENTS:

Feasibility cost share agreement
Location and Vicinity maps
Project management plan
Lobbying certification
Letter of intent
Self-certification of financial capability
Project Partnership Agreement