

Mary Rhodes Pipeline Phase II Bank Erosion

US Army Corps of Engineers Cost-Share Agreement

Nicholas Winkelmann, P.E.

Interim Director Water Systems

and Support Services

Corpus Christi Water



Mary Rhodes Pipeline Phase II History

- 1999 – City purchased 35,000 acre-ft from the Garwood Water Rights from of the Colorado River
- 2010 – City began planning and designing Mary Rhodes Pipeline Phase II
- 2014 – Construction of the 42-mile pipeline began
- 2016 – Mary Rhodes Pipeline Phase II (MRPII) was brought online



Mary Rhodes Pipeline Phase II Background



The MRPII system includes the following structures:

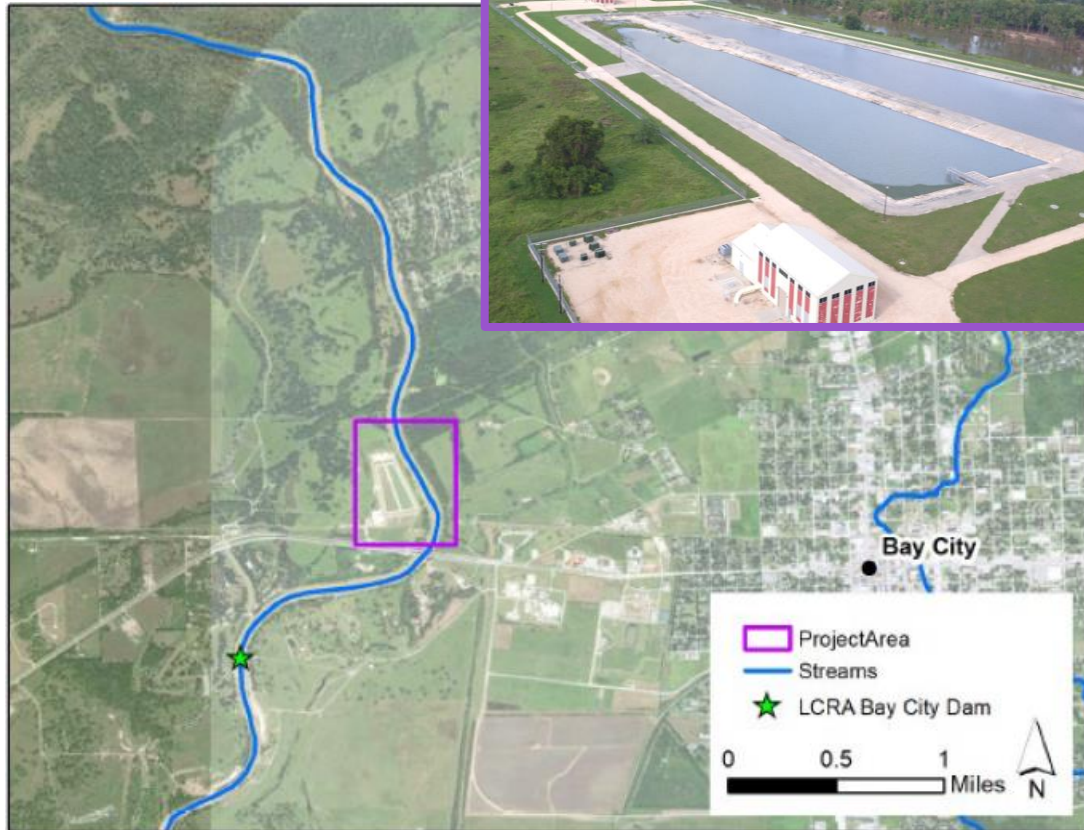
- 41-mile 54-inch Pipeline
- Water intake structure, River pump station, sedimentation basin, and Booster pump station
- Tie-in to the Mary Rhodes Phase I Pipeline at the existing West Delivery Pump Station in Edna, TX

Mary Rhodes Pipeline Phase II Bank Erosion



- 2017 – Hurricane Harvey caused significant erosion to the bank adjacent to the River Pump Station
 - An estimated 16-27 feet of bank has been lost to erosion since 2017.
- 2017/2018 - The City applied to the cost-share program with the US Army Corps of Engineers for bank erosion and shoreline stabilization

Mary Rhodes Pipeline Phase II USACE CAP 14 Program



US Army Corps of Engineers (USACE)

Continuing Authorities Program (CAP)
Section 14 - Emergency Stream Bank
and Shoreline Protection

- March 2021 – The City entered a contract for a cost-share agreement with the USACE through their CAP 14 program for the feasibility, design, and construction of a bank stabilization project.

Mary Rhodes Pipeline Phase II USACE CAP 14 Program

- Phase I – Feasibility (Completed)
 - Phase I - Investigate and find a solution to address the on-going erosion along the Colorado River
 - Incurred Expenditures:
 - The first \$100k towards the feasibility study was fully Federally funded.
 - \$175,000 additional Federal funds contributed were to this project.
 - City contributed an additional \$175,000.
- Phase II – Design and Implementation
 - Designing and rebuilding 2,630 feet of bank.
 - Projected Expenditures (65% federal and 35% City):
 - Design: Federal Contribution of \$796,900 and City contribution of \$429,100.
 - Construction: Federal contribution \$7,800,000, and City contribution \$4,200,000.

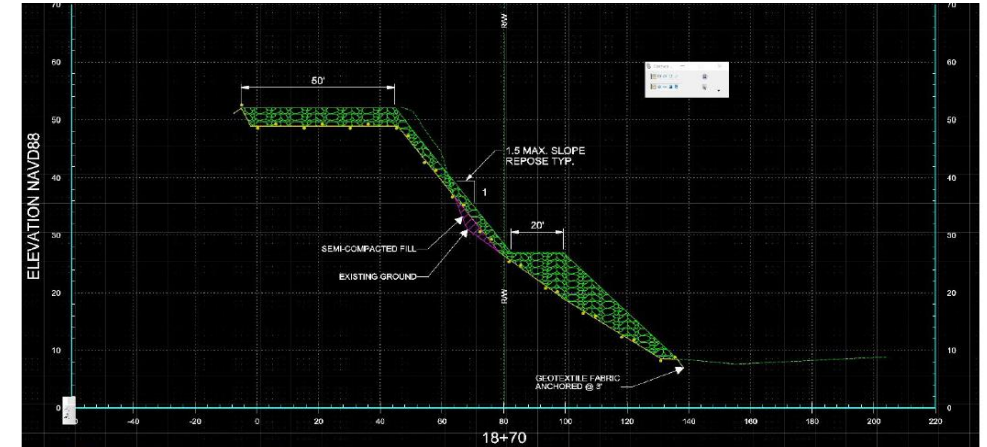


Figure 2-1: Alternative 5 Typical Cross-Section (Tieback)



Figure 2-2: Example of Alternative 5 as constructed on the Brazos River near Richmond, TX

Mary Rhodes Pipeline Phase II Staff 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 II System Improvements project.



Questions