
Meeting Date: June 23, 2021
Staff Contact: Diane Agnew, Environmental Manager

TITLE: **OB-21-12 - Reuse Plan**

SUMMARY:

The Water Authority has developed a Reuse Plan, one of five implementation plans identified in *Water 2120*. Integration of reuse as a supply alternative to meet demand into the future was one of the key findings during development of *Water 2120*. Baseline modeling suggests that wastewater will become available for use as a supply in the mid-2020's.

The Reuse Plan outlines how the Water Authority will apply the adaptive management process to evaluate, select, design, and implement reuse projects as part of developing reuse as a supply alternative. For adaptive management to be effective, there is an element of iterative evaluation of existing and new projects to ensure current information is considered in the evaluation and selection of new projects as well as the operation of ongoing reuse projects. The Reuse Plan discusses how the Water Authority will apply the evaluation criteria from *Water 2120* that was developed with input from customers, the Technical Customer Advisory Committee (TCAC), and technical experts. The plan is meant to be a "living" document with an emphasis on using updated information to identify projects and tasks for the Water Authority to proceed with, pending board approval.

Included in the Reuse Plan are summaries of four reuse projects that rose to be the topmost ranking during evaluation either during *Water 2120* or during subsequent project review.

FISCAL IMPACT:

None.

Water Authority Reuse Plan

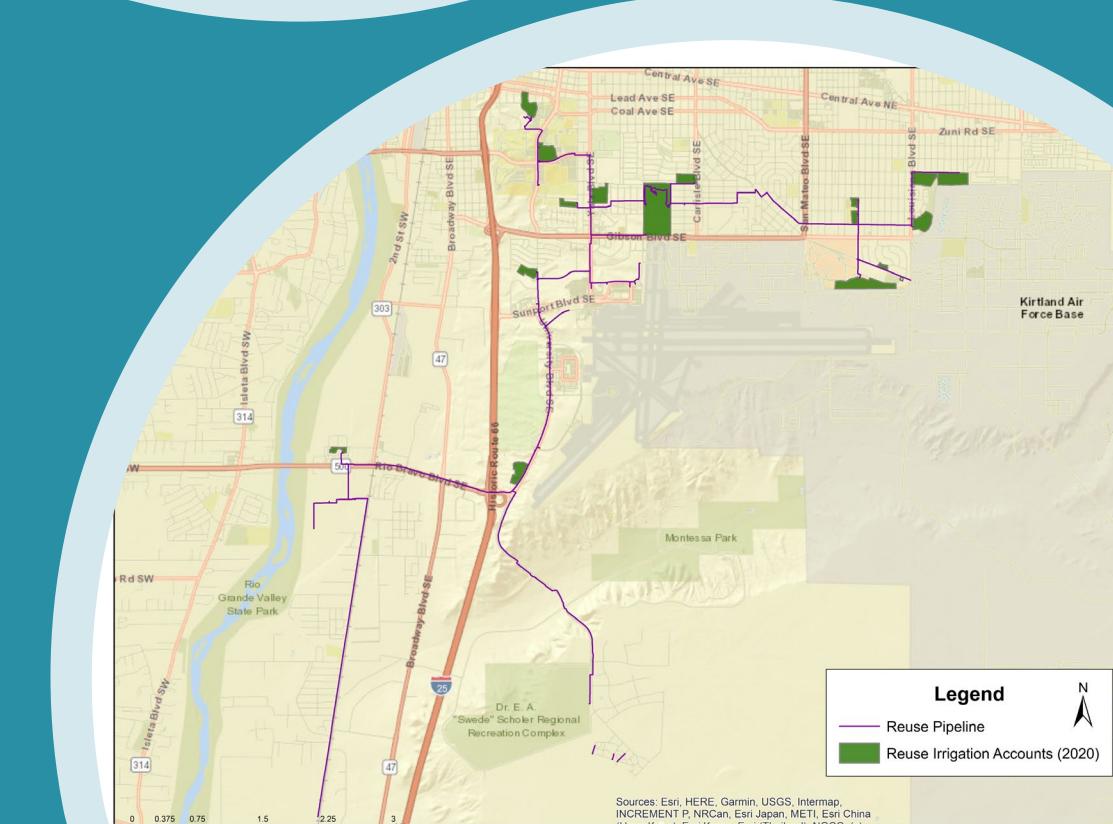
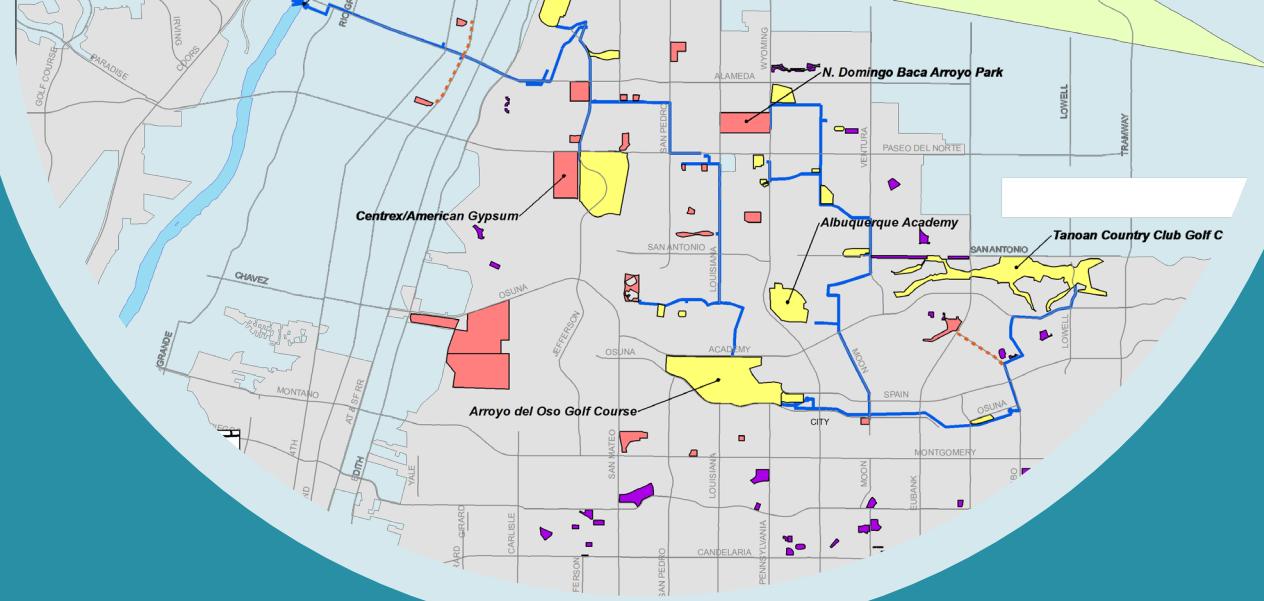
June 23, 2021

Diane Agnew
Environmental Manager
Water Resources Division



Action Shot – Water Authority Reuse

- Two existing reuse systems
- Southside Municipal Effluent Polishing and Reuse Project (Southside Reuse)
- North I-25 Non-Potable Surface Water and Effluent Reuse Project (North Reuse)
- Supplying turf irrigation since 2003
- Total annual demand of 4,000 acre-feet for both projects
- Southside Reuse is limited by demand



Reuse Plan

PURPOSE

- Outlines how the Water Authority will apply the adaptive management process and identifies evaluation criteria
- Levels of Service reflect *Water 2120* policies and sub-policies
- Ranked Decision Making
 - Developed during *Water 2120*

Adaptive Management Approach

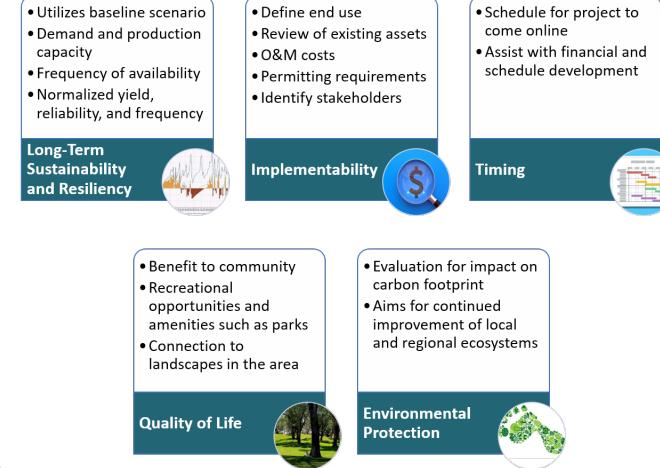
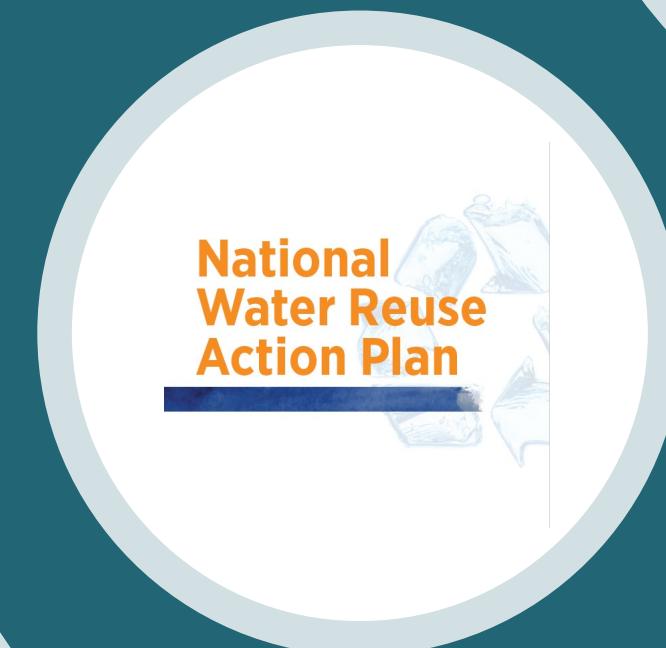


Informed Planning

- Utilize network of utilities through WateReuse membership
- Incorporate findings from Water Research Foundation research
- Pull from the U.S. EPA National Water Reuse Action Plan (WRAP) toolbox
- Application of *Water 2120* evaluation criteria

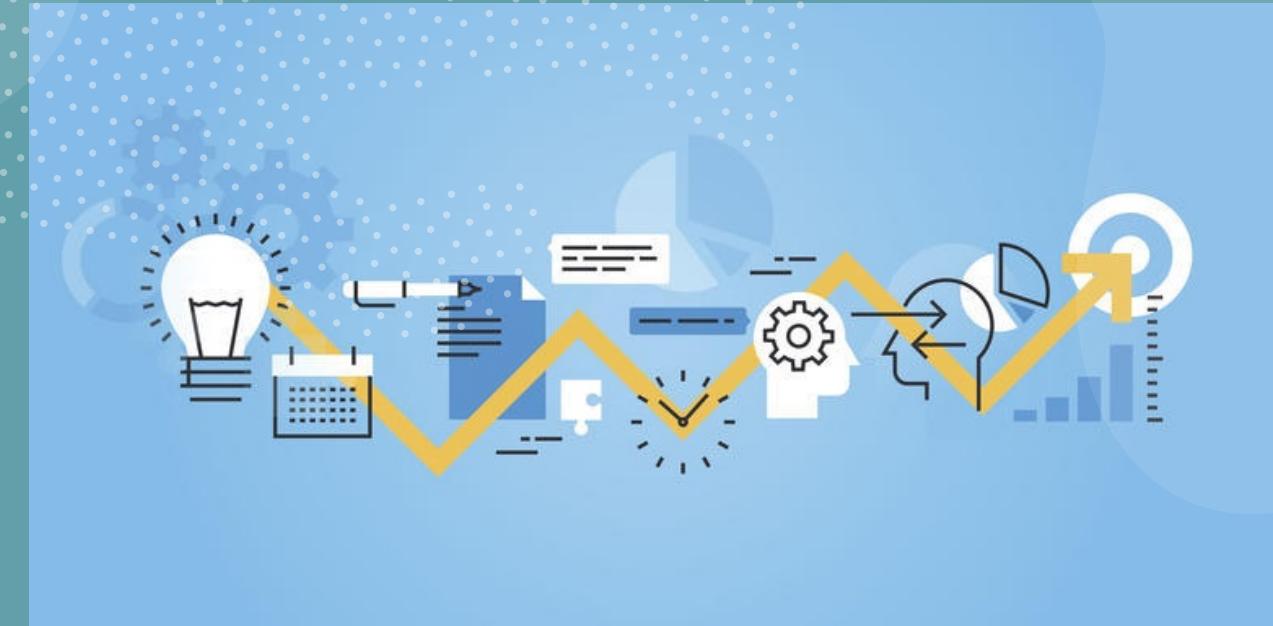


Albuquerque Bernalillo County
Water Utility Authority



THE
Water
Research
FOUNDATION

Monitoring and Evaluation



- Compliance Monitoring
- Implementation Monitoring
- Capacity Monitoring

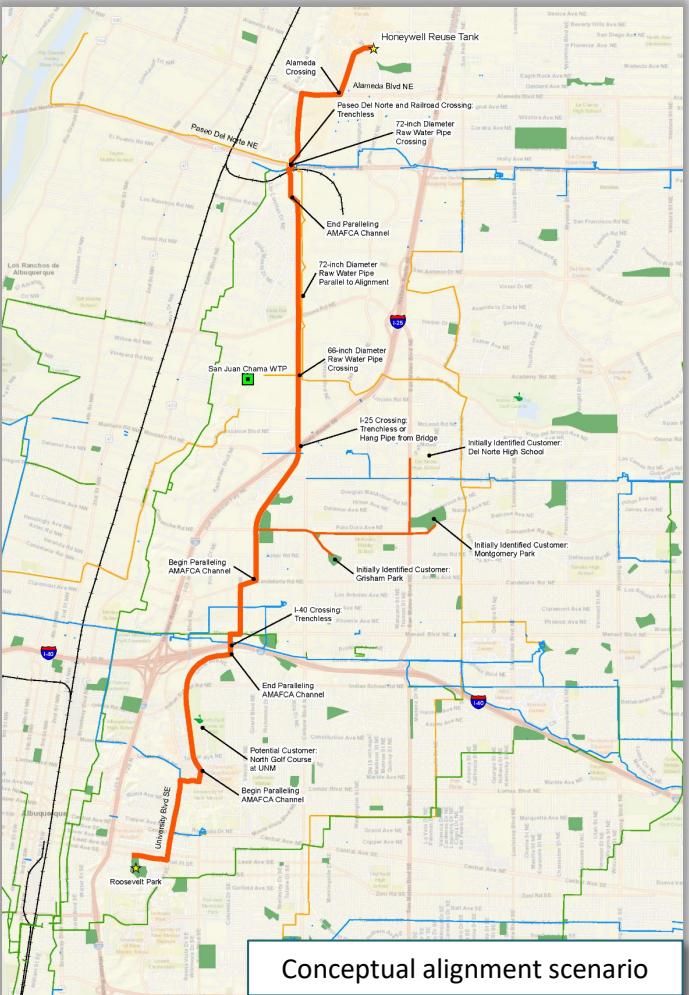




Current Reuse Project: Winrock Reuse System

- On-site, small-scale reuse facility
- Yield is roughly 25,000 gallons per day
- Expands reuse water for irrigation to Uptown Albuquerque
- Project completion estimated in 2022

Proposed Reuse Project: South-to-North Reuse System



- Expand existing reuse system by 50%
- Increase turf irrigation in eastern service area
- Conveyance piping from Southside Water Reclamation Plant (SWRP) to Drinking Water Plant (DWP)
- Increased available SJC water for Bear Canyon



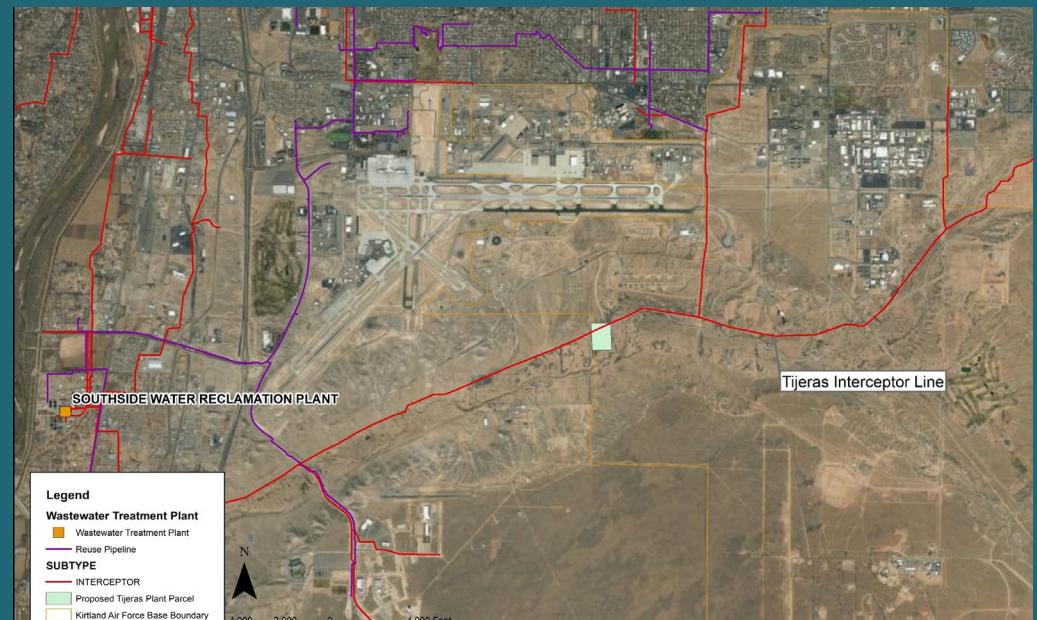
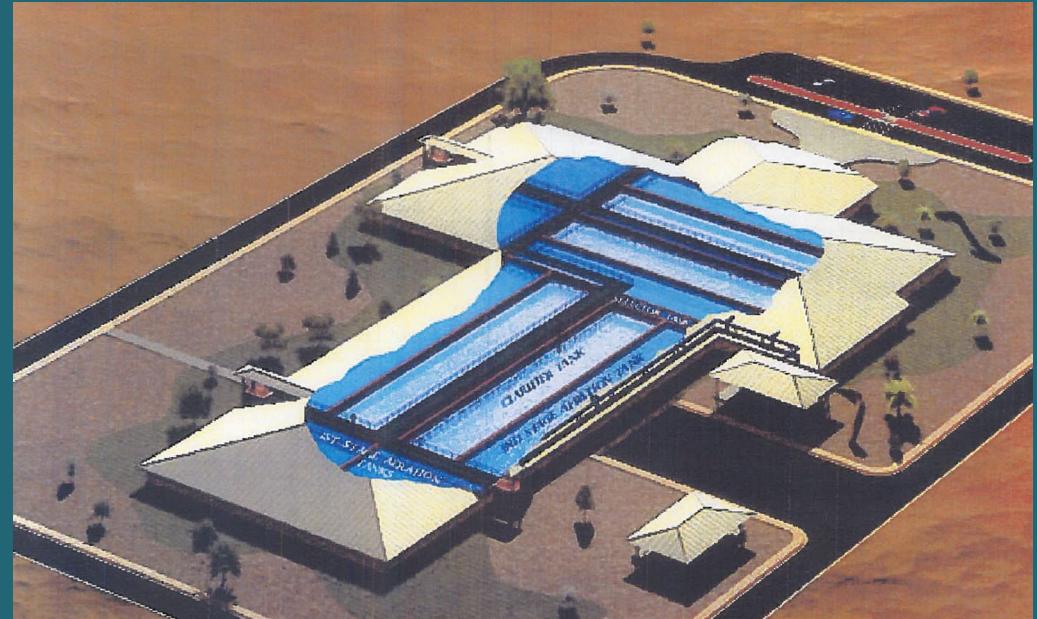
Proposed Reuse Systems

Bosque Reuse System

- Divert water from existing Riverside interceptor line
- Expands reuse water for turf irrigation to westside service area
- Potential for aquifer storage and recovery (ASR) component

Tijeras Reuse System

- Reuse water for turf irrigation in southern and eastern service area
- Diverts water from existing Tijeras interceptor line
- Potential for ASR component



Summary of Reuse Projects



Connecting South-to-North Reuse

- Capital Costs: \$23M
- Funding received (May 2021): \$0
- Project Completion Year: 2030

Winrock Reuse System



- Capital Costs: \$0
- Funding Received (May 2021): \$3.5M
- Project Completion Year: 2022

Bosque Reuse System



- Capital Costs: \$137M
- Funding Received (May 2021): \$1M
- Project Completion Year: 2045



Tijeras Reuse System

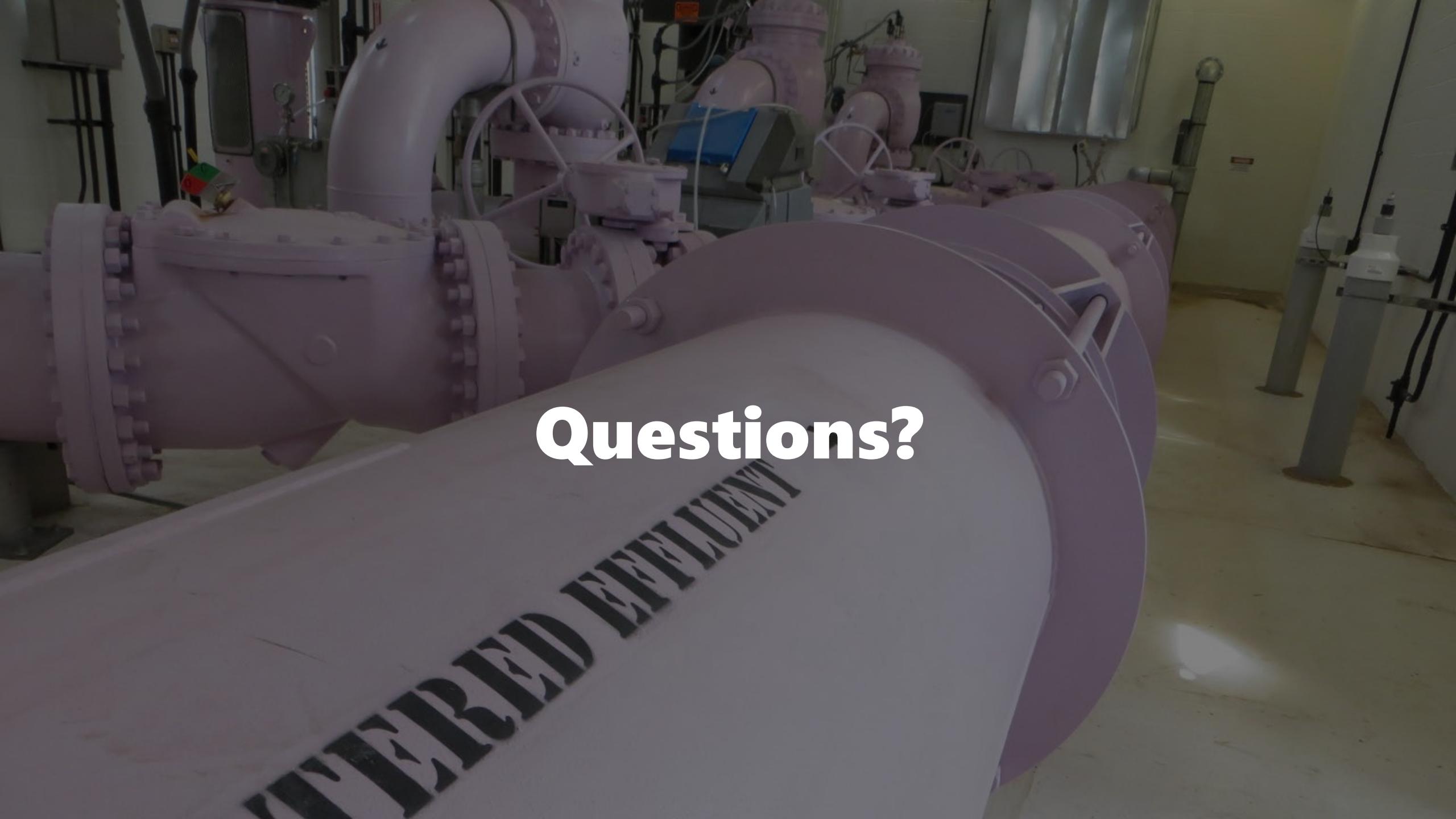
- Capital Costs: \$116M
- Funding Received (May 2021): \$690,000
- Project Completion Year: 2055



Summary

- Adaptive management approach to reuse program
- Feedback loop of monitoring and evaluation
- Evaluation criteria build in stakeholder engagement and incorporation of key design criteria
- Two reuse projects identified as most feasible



A large industrial pipe, painted a vibrant purple, dominates the foreground. A white valve is attached to the pipe, and a sign with the words "INFERRED EMISSIONS" is attached to the pipe's body. The background is a complex network of pipes, valves, and industrial equipment, all in a similar purple color scheme, set against a backdrop of a white wall and a yellow floor.

Questions?

INFERRED EMISSIONS