
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

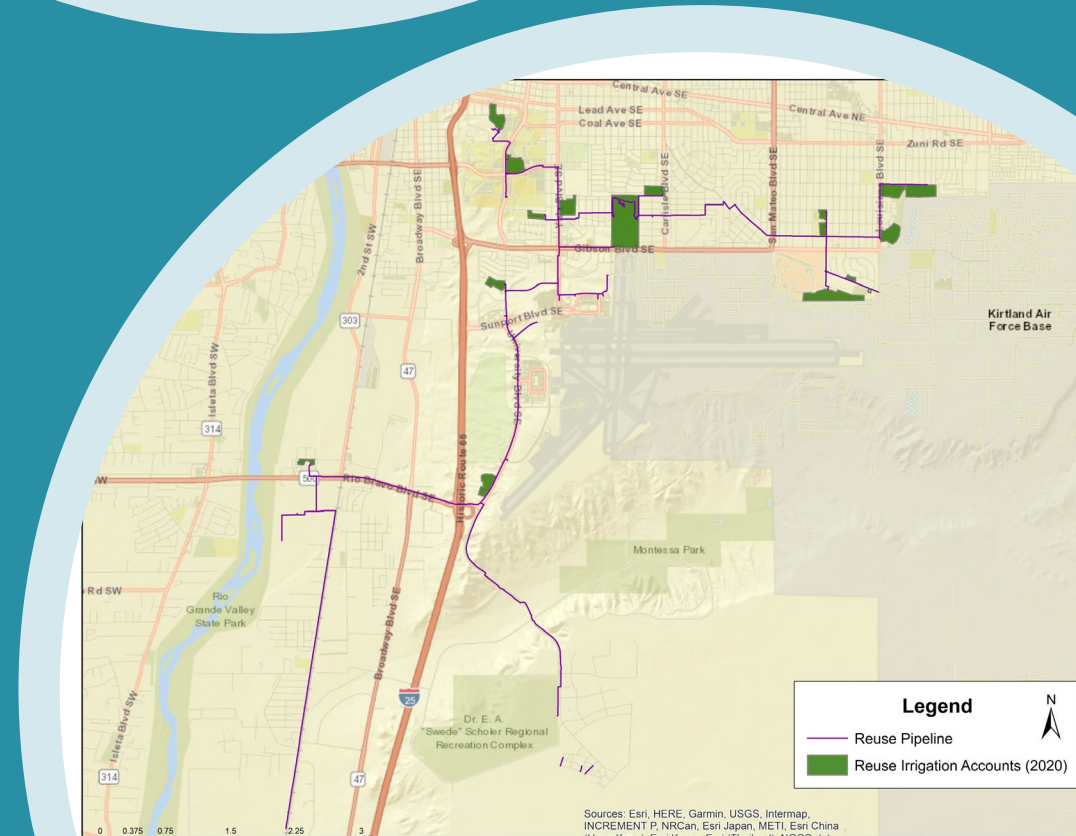
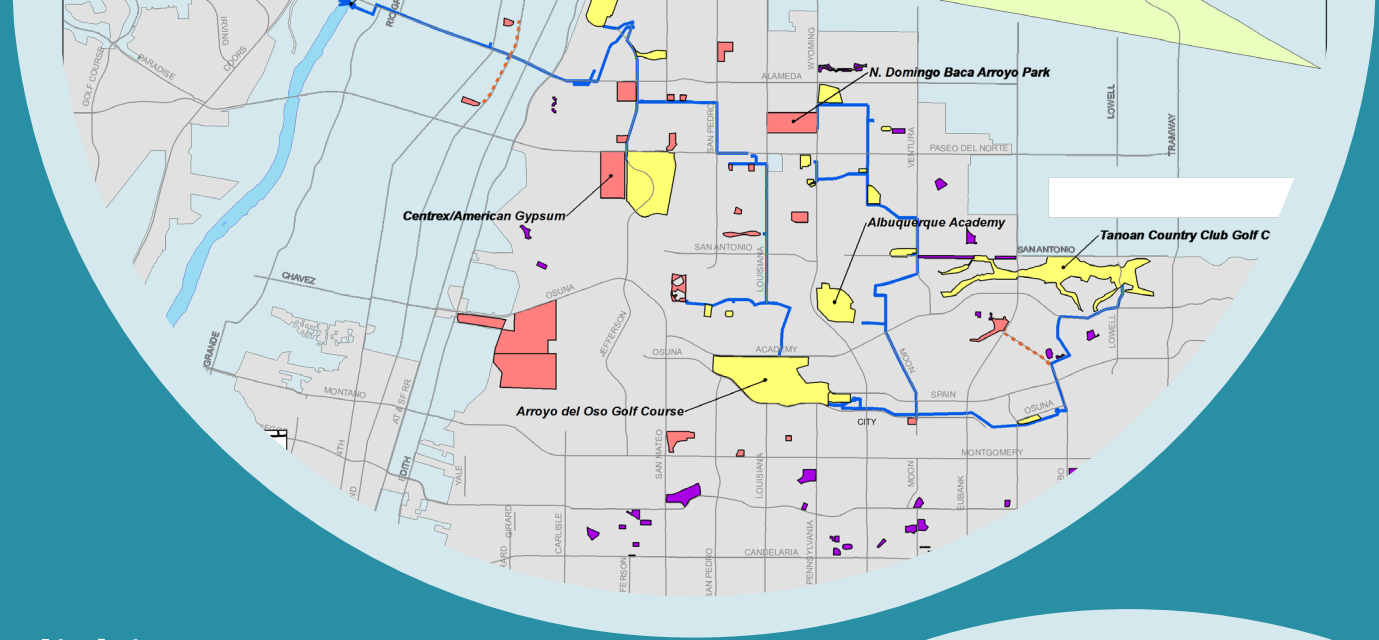
June 23, 2021

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



A photograph of wooden blocks arranged to spell out the word 'PURPOSE' on a wooden surface. The blocks are light-colored wood with black letters. The word 'PURPOSE' is spelled out in a row of five blocks. Other blocks with letters like 'S', 'V', 'L', 'M', 'H', 'K', and '7' are scattered around. A semi-transparent white circle is overlaid on the left side of the image, containing the text 'Reuse Plan' and a bulleted list.

Reuse Plan

- 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 WaterReuse 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



National Water Reuse Action Plan



Albuquerque Bernalillo County
Water Utility Authority



THE
Water
Research
FOUNDATION

- Utilizes baseline scenario
- Demand and production capacity
- Frequency of availability
- Normalized yield, reliability, and frequency

Long-Term
Sustainability
and Resiliency



- Define end use
- Review of existing assets
- O&M costs
- Permitting requirements
- Identify stakeholders

Implementability



- Schedule for project to come online
- Assist with financial and schedule development

Timing



- Benefit to community
- Recreational opportunities and amenities such as parks
- Connection to landscapes in the area

Quality of Life

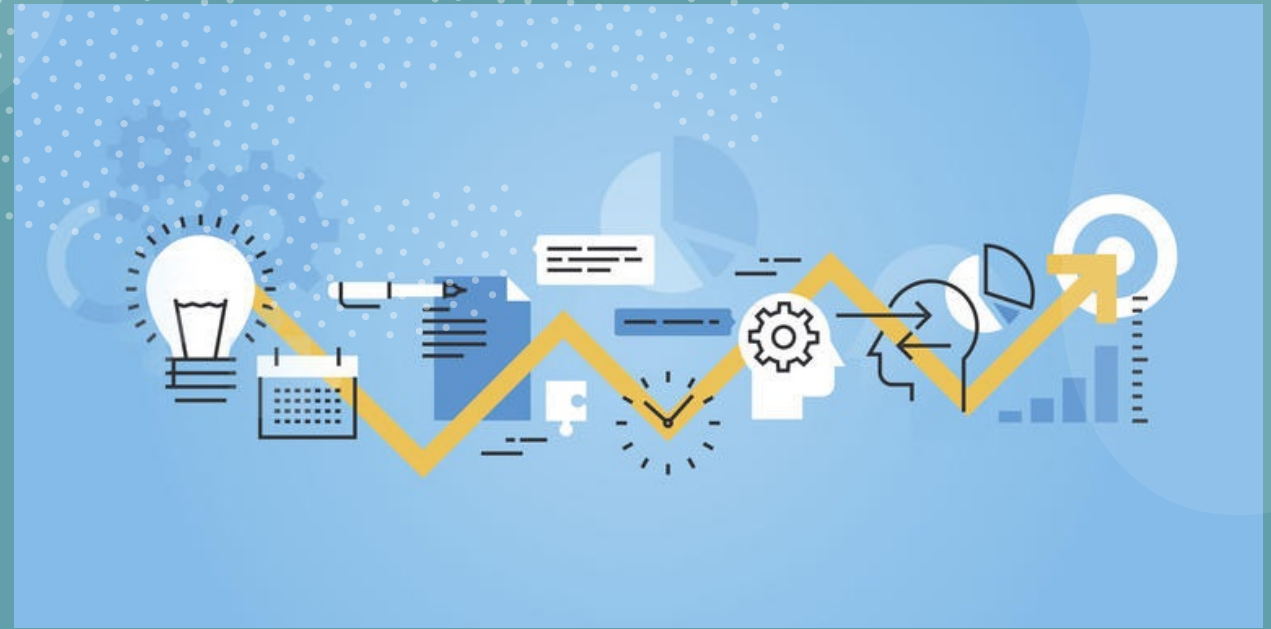


- Evaluation for impact on carbon footprint
- Aims for continued improvement of local and regional ecosystems

Environmental
Protection



Monitoring and Evaluation



- Compliance Monitoring
- Implementation Monitoring
- Capacity Monitoring

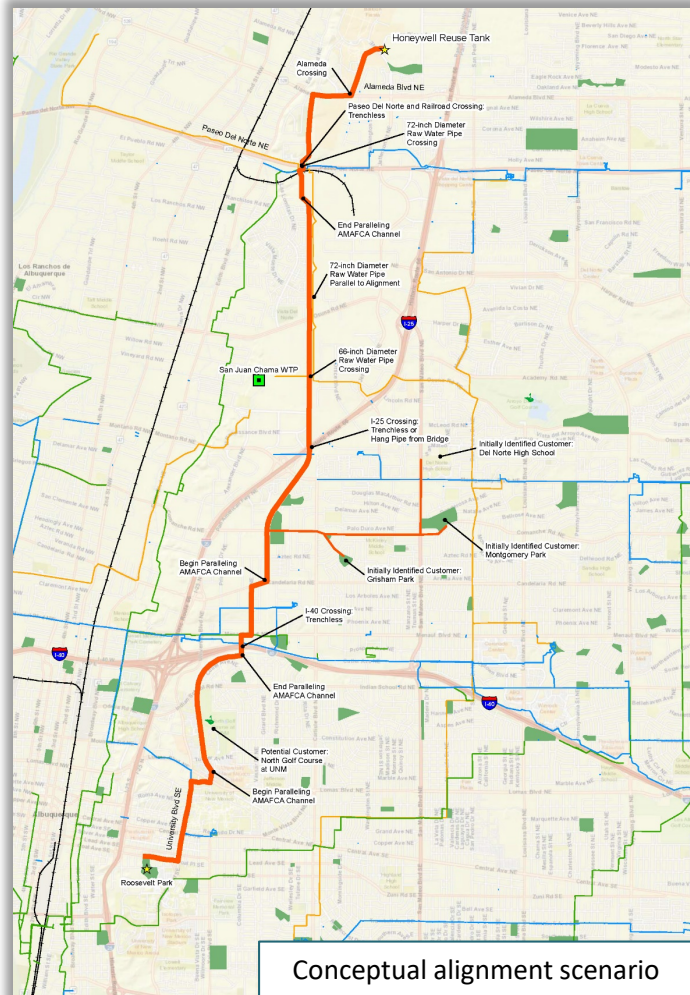




Current Reuse Project: Winrock Reuse System

- 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



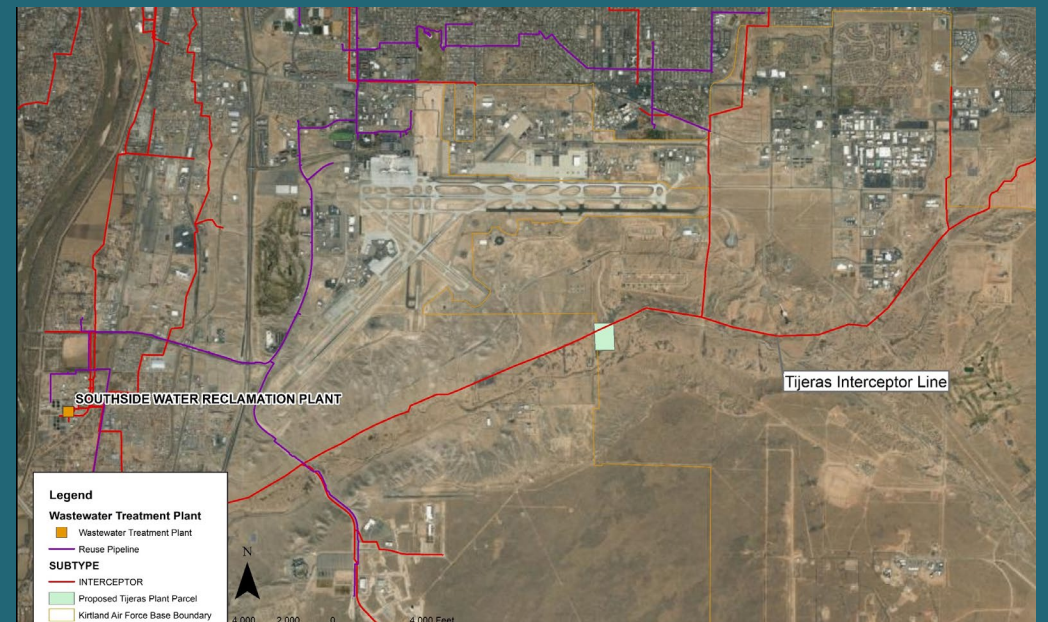
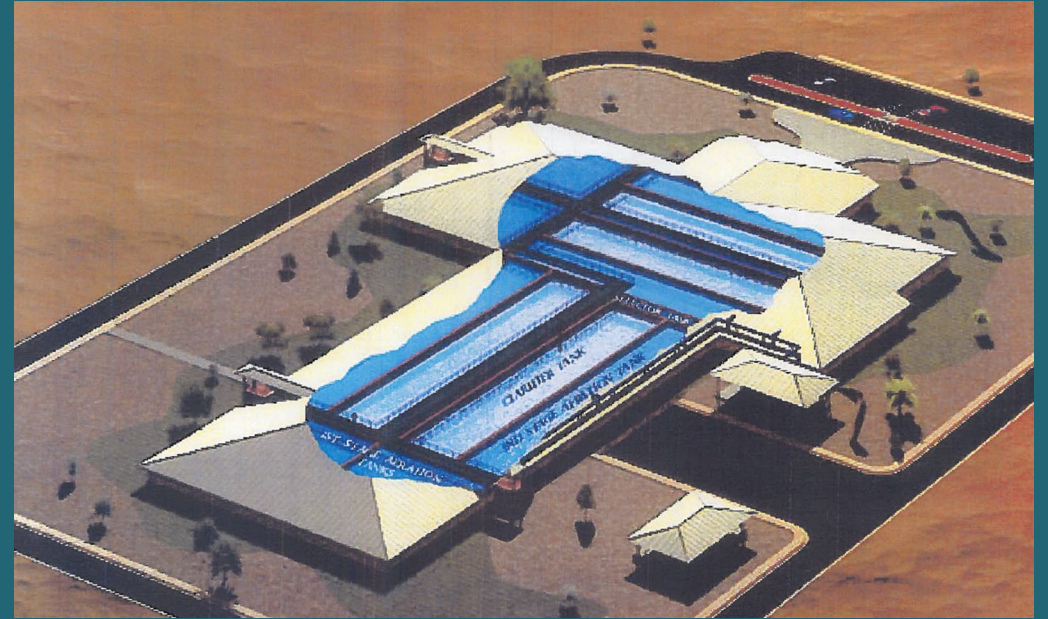
Proposed Reuse Systems

Bosque Reuse System

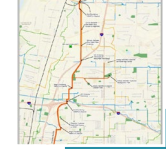
- Divert water from existing Riverside interceptor line
- Expands reuse water for turf irrigation to westside service area
- Potential for aquifer storage and recovery (ASR) component

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





Questions?