



# **The Proposed Northern Delivery System**

A Renewable Water Project to Secure Our Future

Triview Metropolitan District, JDS-Hydro Consultants, & NES Inc

# Presentation Overview

- Triview's Water Resource Plan
- Northern Delivery System Overview
- Northern Delivery System Routing Alternatives
- Project Timeline
- Next Steps
- Openhouse Breakout Session



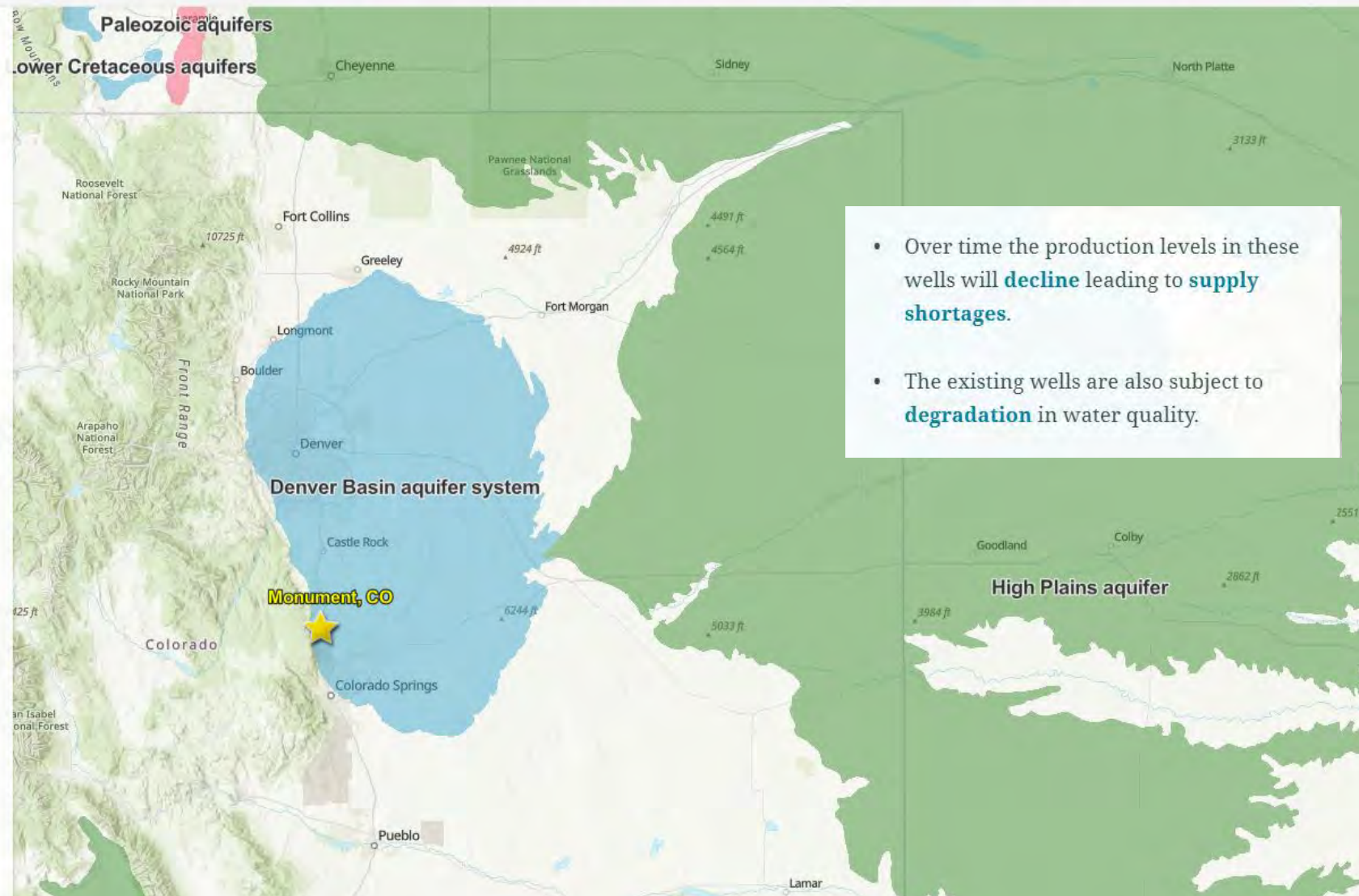
## Non-Renewable Water Supply

Triview Metropolitan District serves its customers from 9 Denver Basin Wells located through out the District.

Other districts and municipalities in the region have the same source of supply.

These wells are considered a **nonrenewable** source of supply as they cannot be replenished with rainfall or snow melt as quickly as they are withdrawn.

- Given the **limited** geographic size of the district and the **finite** supply of water in the aquifers, adding additional wells will not result in additional water being produced.

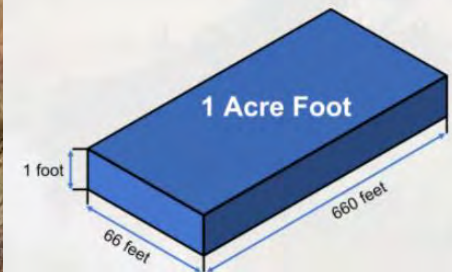




## Renewable Surface Water Supply

To secure future water demands, Triview Metropolitan District is working with other northern water suppliers to develop a system to bring **renewable water** to Northern El Paso County municipal water customers.

- Triview also has purchased and/or leased nearly 4,000-acre feet of water storage in Big Johnson Reservoir, Stonewall Springs South Reservoir, and has a 40-year excess capacity storage contract in Pueblo Reservoir.
- Triview has purchased nearly 2,000-acre feet of water located on Fountain Creek, the Upper Arkansas River Basin, and the Lower Arkansas River Basin.
- The proposed Northern Delivery System would construct a booster pump station, 10-mile pipeline, and tank to move potable water from a tank at the northern edge of the Colorado Springs Utilities service area to northern water systems.



1 acre-foot is equal to 325,821 gallons. It is the amount of water required to cover one acre of land, one foot deep.



# Project Benefits

[Drought in the West](#)

[Non-Renewable Water Supply](#)

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## Project Benefits



Brings renewal water to northern areas in El Paso County which will reduce reliance on non-renewable groundwater that is decreasing in both quantity and quality.



Improves water quality in Northern El Paso County by providing clean, renewable treated water.



Promotes efficiency by using existing water lines and facilities within the CSU system to convey renewable water from multiple water basins to Northern El Paso County.



Improves fire protection for areas along the pipeline route and within Fox Run Regional Park by constructing a 1 MG tank and fire hydrants.

Pueblo Reservoir



# The Importance of Constructing a Conjunctive Use Water Delivery Project

Non-Renewable Water Supply

Renewable Surface Water Supply

Drought in the West

Project Participants

The Northern Delivery System

Public Process

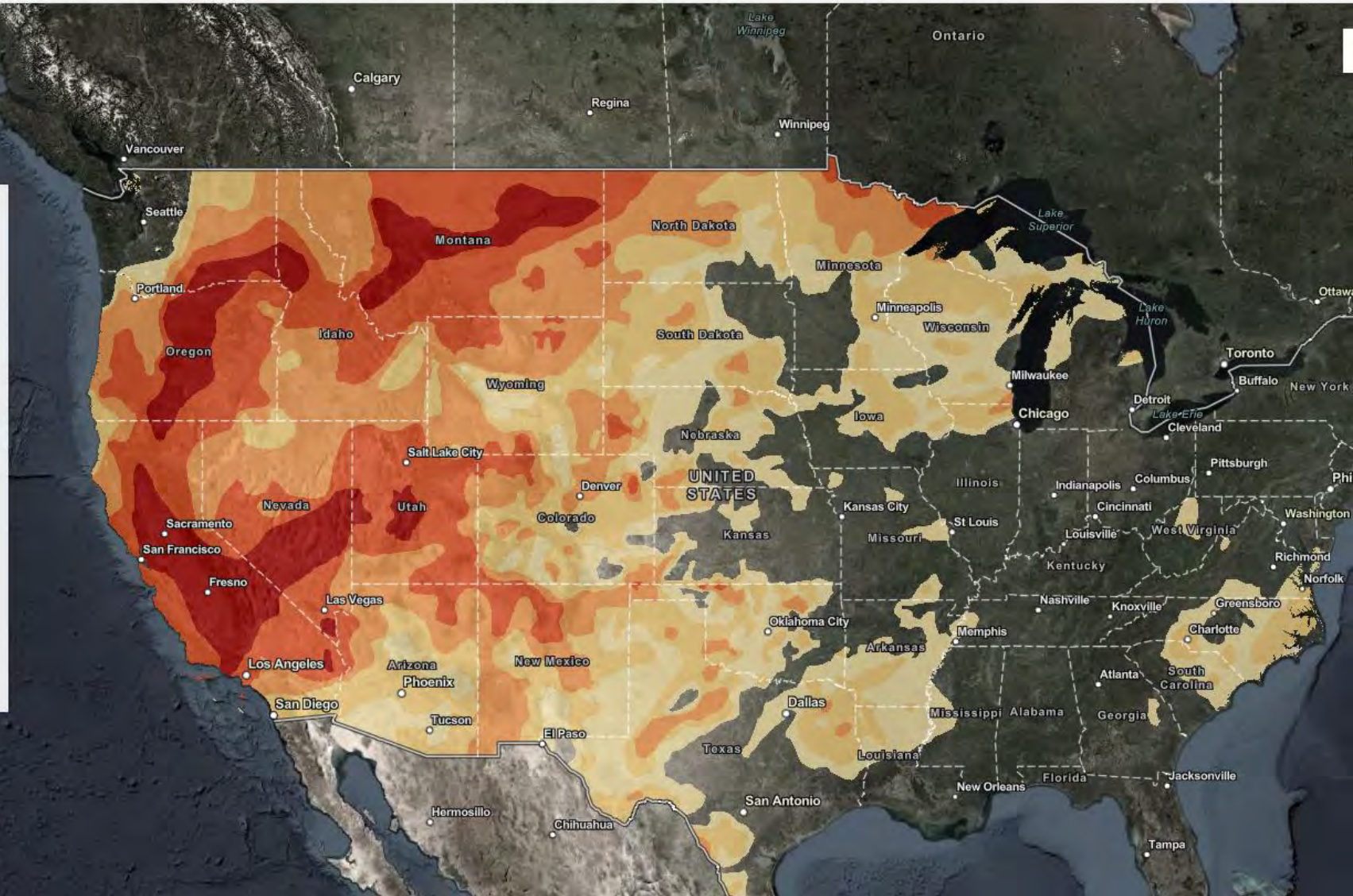
Project Team

## Drought in the West

Over half of the U.S. is experiencing **abnormally dry** conditions.

Water providers must act to **secure their water future**

A **conjunctive use** water supply leverages groundwater and surface water concurrently to optimize water demand and provide **redundancy**





# Triview's Renewable Water Supply Plan:

Drought in the West

Non-Renewable Water Supply

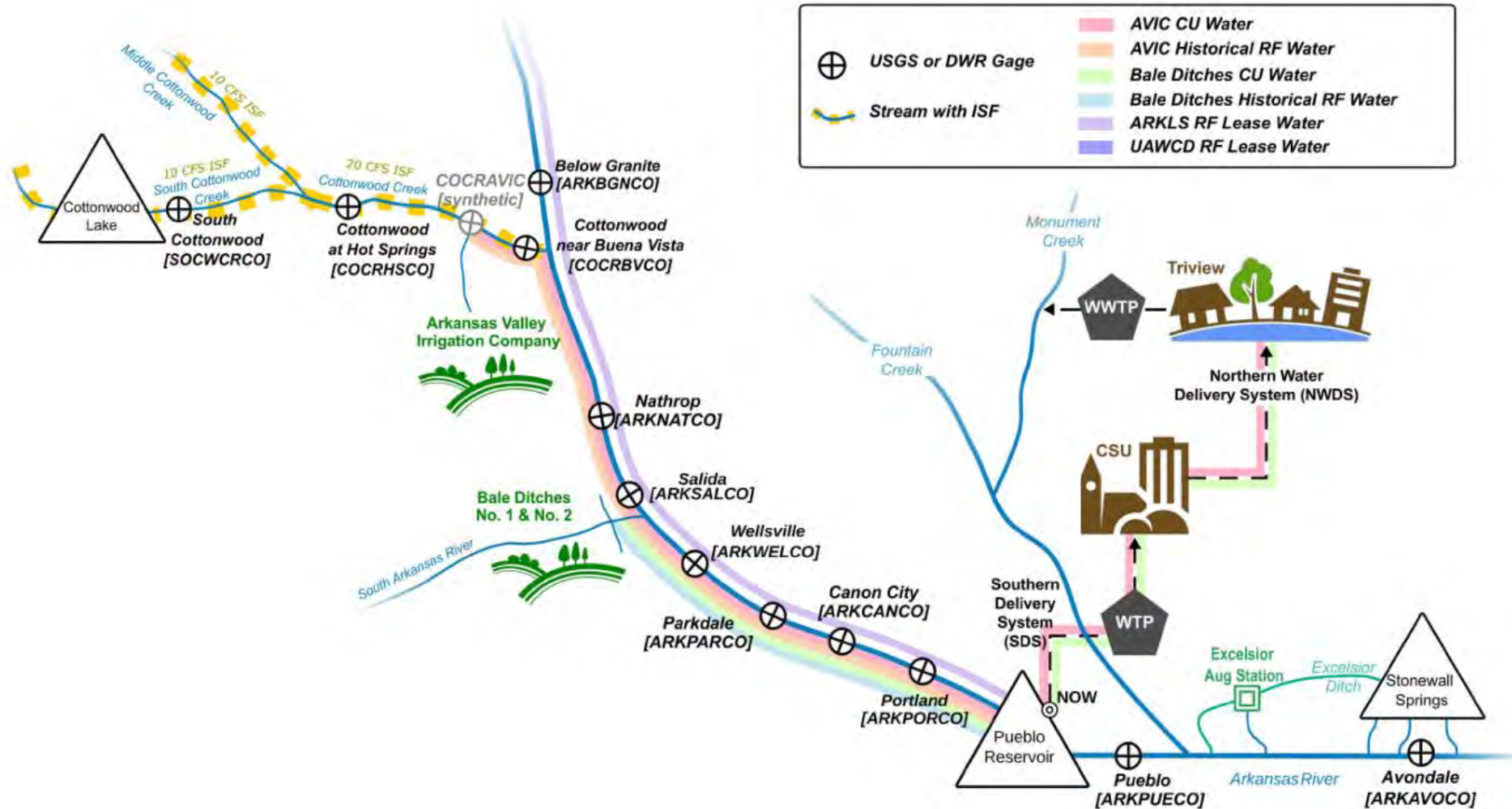
Renewable Surface Water Supply

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# Triview's Renewable Water Supply Plan

Drought in the West

Non-Renewable Water Supply

Renewable Surface Water Supply

The Northern Delivery System

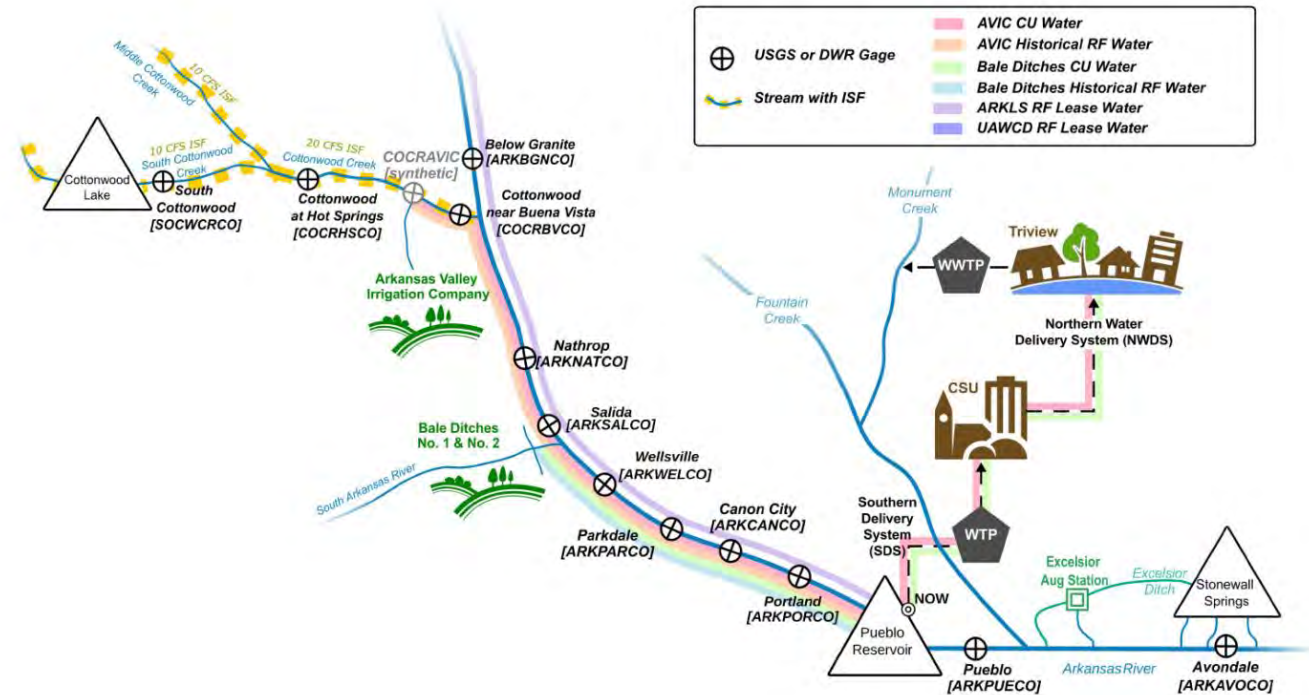
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*Triview's Renewable Water Supply Plan provides a long-term, reliable, and efficient means of water delivery to municipal water customers.*

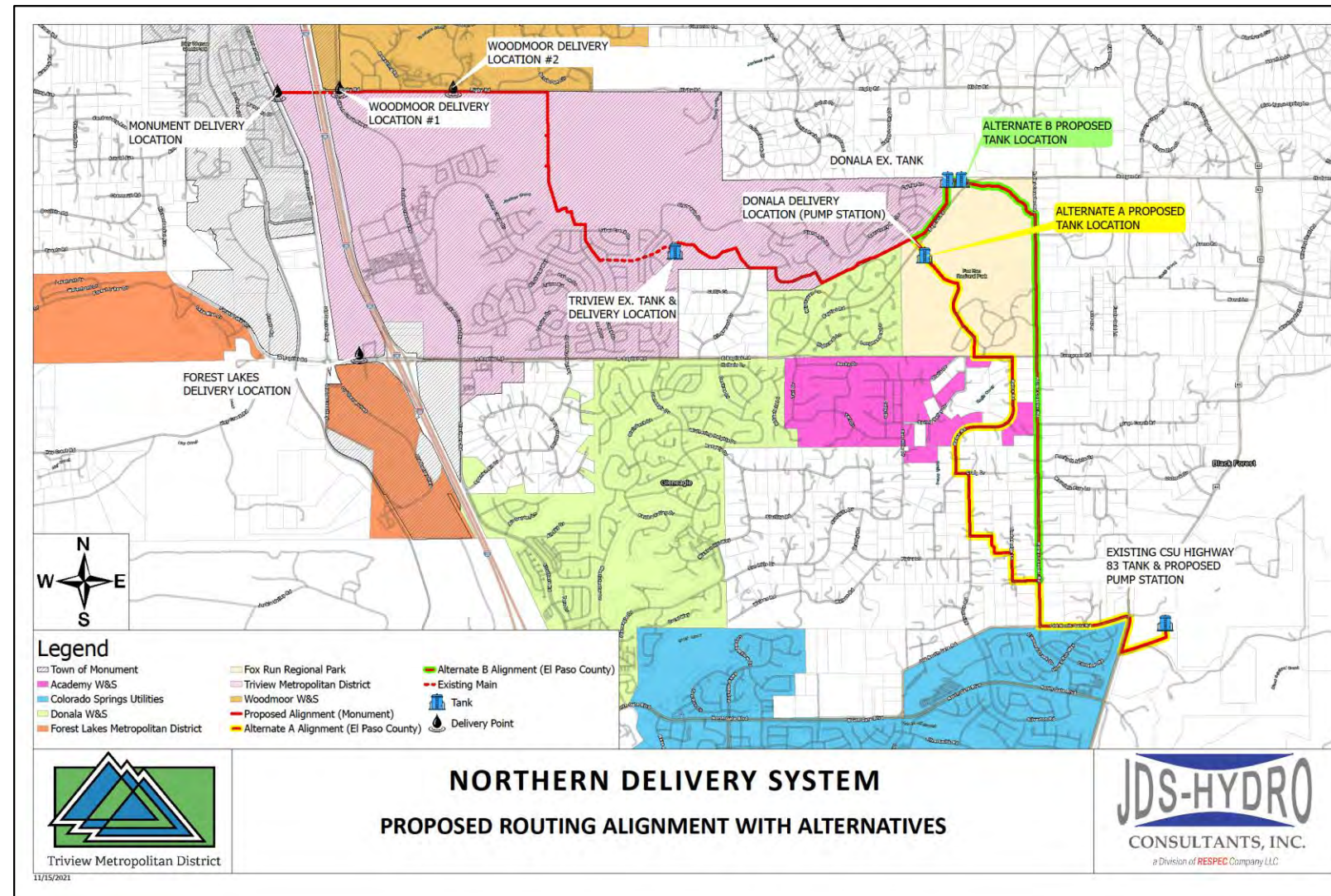
- Provides water storage and conveyance capacity to increase water management flexibility within Triview's water supply portfolio and service area;
- Reduces dependency on nonrenewable groundwater except on max use days and drought;
- Facilitates conversion to renewable surface water;
- Complements Triview's reuse of its return flows in the form of treated effluent discharged to Monument and Fountain Creeks; and
- Maximizes the use of existing infrastructure, including the Southern Delivery System (SDS), to serve Triview's municipal and industrial water supply demands where feasible





## The Northern Delivery System Highlights:

- Originating source of water is Pueblo Reservoir
- Delivers water through CSU's \$800M SDS Pipeline.
- Potable water will be delivered to Triview and other participants through a single pump station at CSU Highway 83 Tank Site
  - Northern El Paso County Districts and Municipalities
- Proposed 1 MG Storage Tank will serve as hydraulic high point and serve as ground storage.





# Project Participants

## Project Sponsors

Forest Lakes Metropolitan District

Triview Metropolitan District

## Potential Project Participants

Academy W&S

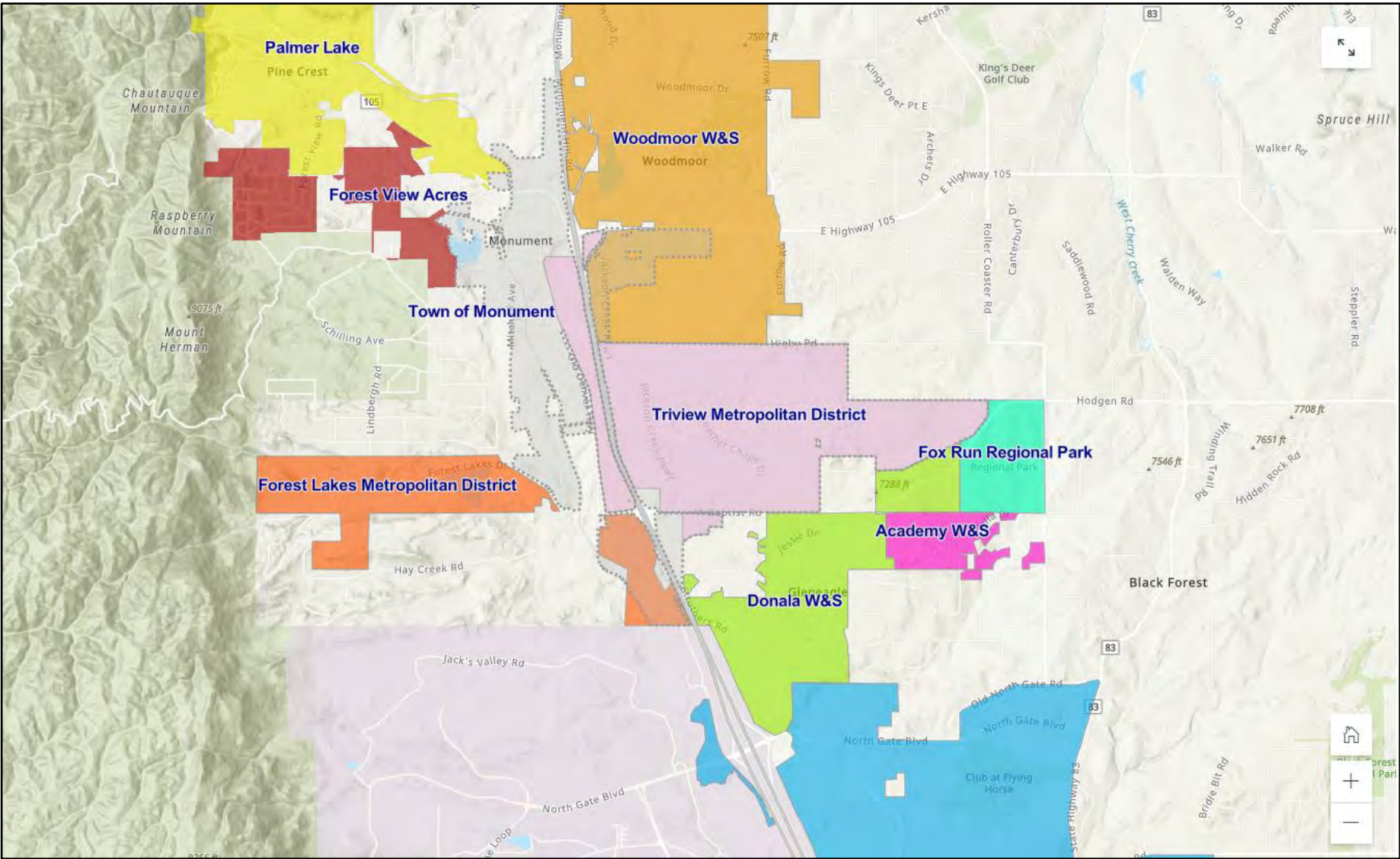
Donala W&S

Forest View Acres

Palmer Lake

Town of Monument

Woodmoor W&S

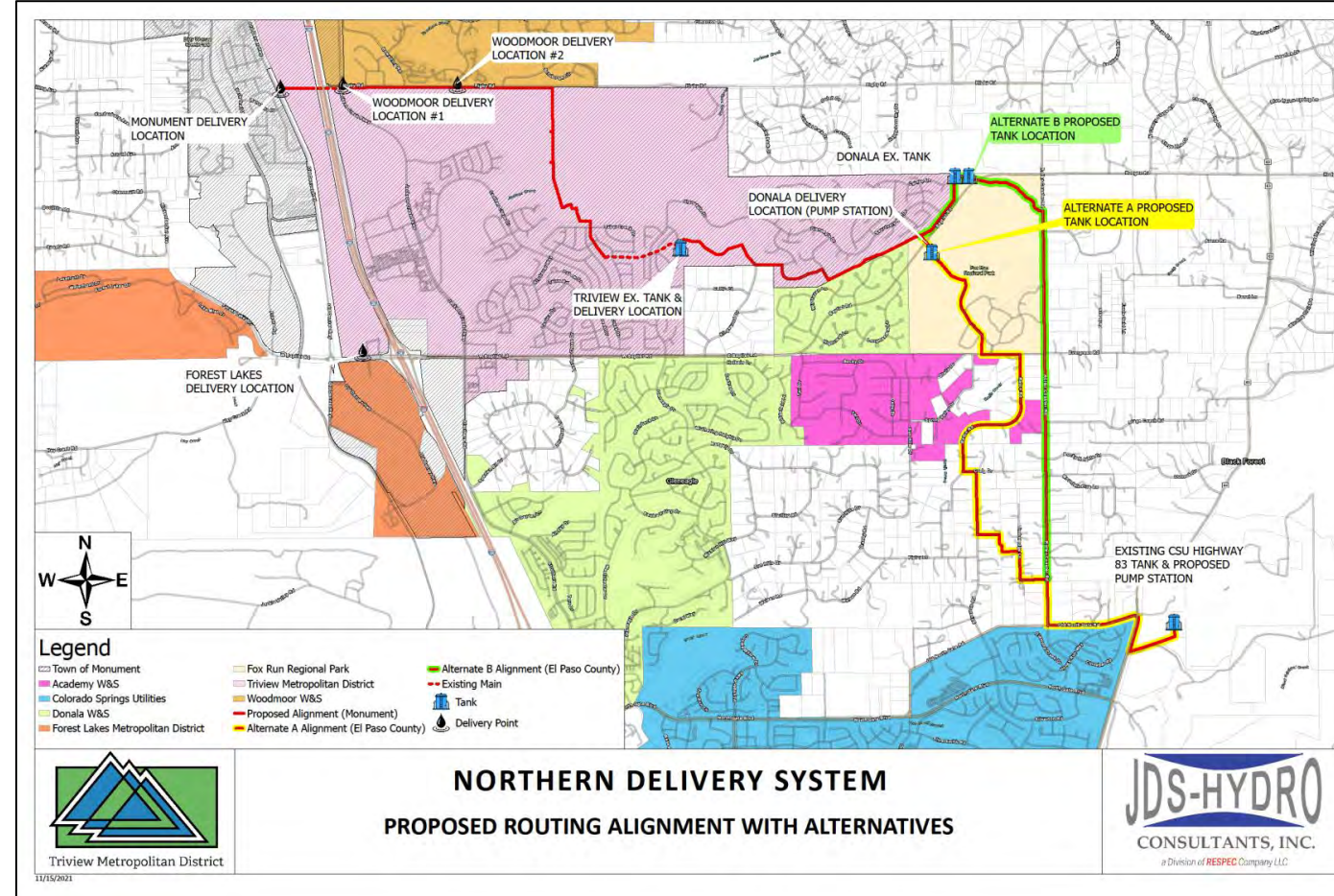




## The Northern Delivery System Alternative Considerations:

### Alternate A

- Lower tank elevation resulting in energy efficiency
- Fire hydrants provided to interior of Fox Run Regional Park
- Less impact to major roads
- Less impact to existing trees
- Shorter pipe installation through wooded park area
- Tank located adjacent to Baptist Road
- Tank adjacent to existing trail system
- Pump station required for Donala

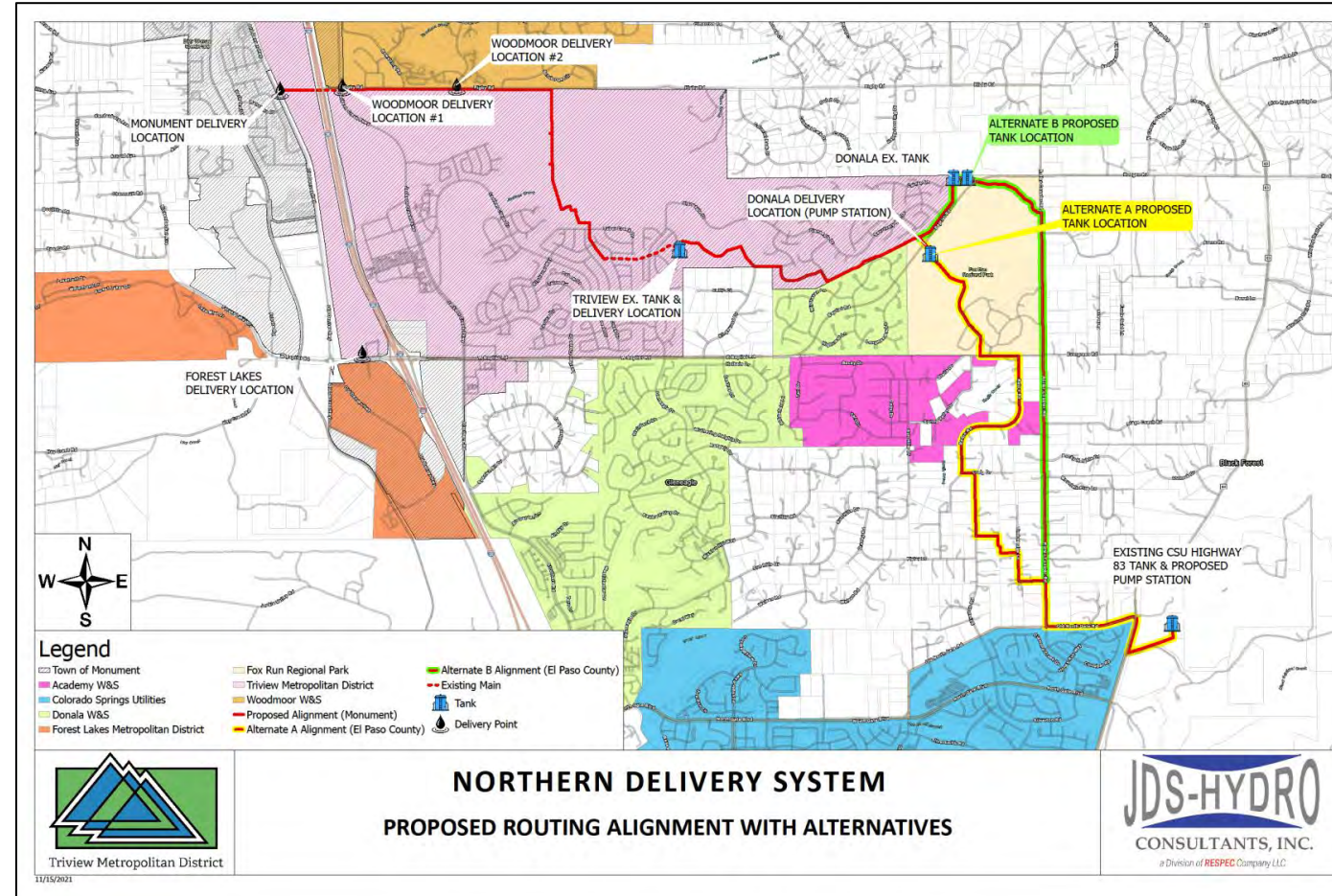




## The Northern Delivery System Alternative Considerations:

### Alternate B

- Consolidating tank sites (Existing Donala & proposed)
- Utilize existing trail system for pipeline construction
- Underground boring ~900 feet across Baptist Rd
- No separate pump station for Donala W&S
- Fire Hydrants located along Roller Coaster Rd
- Greater expense to NDS rate payers
- More electricity requirements due to higher tank elevation
- No fire hydrants provided in the interior of the park
- Likely closure of Roller Coaster Rd during construction





## Proposed 1 MG Storage Tank

### What will it look like?

The following graphics provide a visualization of various viewpoints adjacent to the proposed storage tank proposed to be located southeast of Baptist Rd within Fox Run Regional Park. A rendering of the tank has been added to surrounding imagery to allow users to conceptualize the visual impact of the proposed tank. The design of the proposed tank strategically mitigates visual impacts.





**1**

## Observation Point 1

Old Baptist Rd Looking Southeast





**2**

## Observation Point 2

Old Baptist Rd Looking Southeast

02

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05







3

## Observation Point 3

Old Baptist Rd Looking Southeast





**4**

## Observation Point 4

Fox Run Regional Park Trail Looking Southwest

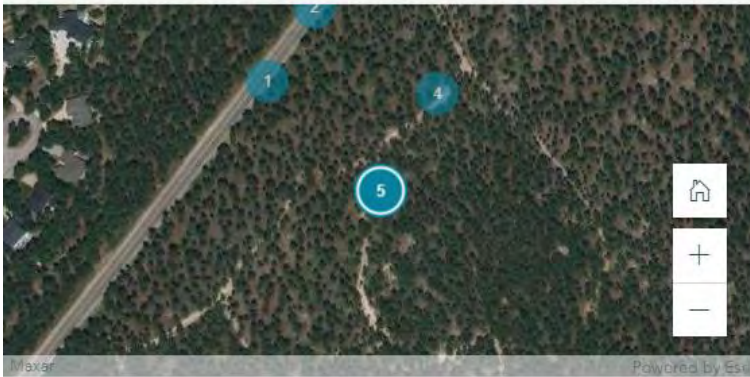
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05







5

## Observation Point 5

Fox Run Regional Park Future Trail Looking Northwest

05  
/  
05





## Environmental Considerations

The El Paso County permitting process requires consideration of environmental impacts. The considerations are numerous and include items such as endangered species, wetlands, plant life, habitat, archeological sites, restoration of vegetation, and more.

Several specific considerations for this project include impacts on:



Recreational users of Fox Run Regional Park



Culturally modified trees within Fox Run Regional Park



Preble's Meadow Jumping Mouse and its habitat near the booster station



## Project Timeline



### Design Process

Q4 2021 – Q4 2022



### Permitting

Q4 2021 – Q1 2023



### Construction

Q2 2022 – Q3 2024

Segment C

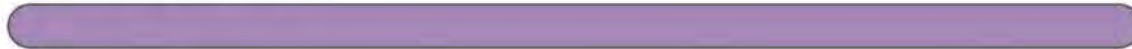
Proposed 1 MG Storage Tank

Segment A and Pump Station



### Reclamation

Q4 2022 – Q2 2025





## Public Process

Triview is in the process of submitting applications outlining project details and obtaining all permits, agreements and approvals required by El Paso County. The tank design will be submitted to the State Health Department for review and approval.

Updates on the public process will be posted on Triview's website. See the link below.

### Latest Public Meeting Information





## Project Team

### Project Sponsors



Triview Metropolitan District

Formed in 1985, Triview Metro District operates much like a town. Triview provides water, wastewater and stormwater services, along with maintenance of community assets such as the roads, parks and open spaces. Triview is responsible for building, operating and maintaining the community's public infrastructure and we generate revenues by levying fees and charges, collecting taxes, and issuing bonds. Triview strives to maintain and enhance the value of our more than 1,800 homes and 60 commercial customers, and also sets standards and design criteria for the construction of public facilities and conducts their own inspections.



FOREST LAKES

The Forest Lakes Metropolitan District is responsible for water and wastewater services, drainage, parks and trails, landscaping, and street light services for the three Pinon Pines Metropolitan Districts. The Forest Lakes Metropolitan District currently provides water service from a Denver Basin well and well-head treatment plant but will eventually be using the surface water supply which is stored in Bristlecone Reservoir. The Forest Lakes Metropolitan District jointly owns a wastewater treatment plant with Triview Metropolitan District and Donala Water and Sanitation District – the Upper Monument Creek Regional Wastewater Treatment Facility. That plant is closely monitored by the Colorado Department of Health and Environmental Protection Agency.



## Project Team



JDS-Hydro Consultants, Inc., A Division of Respec is a multi-disciplined civil engineering firm with an established reputation throughout southern Colorado specializing in municipal water and wastewater engineering services. JDS-Hydro Consultants, Inc has been providing engineering services in Colorado for over 20 years.



N.E.S. Inc. is a professional services corporation based in Colorado Springs that provides land planning, landscape architectural design, and urban design services. For over 40 years, NES has successfully been a part of the growth and design of the Pike Peaks Region and continually emphasizes the values of a community-based practice and approach to the City and Region in which we live, work, and play.





# Open House Breakout

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