

## **WISE Conjunctive Use Infrastructure WSRA Grant Summary**

### Overview

The Water Infrastructure and Supply Efficiency (WISE) Partnership is a regional water supply project between Aurora Water, Denver Water, and the South Metro WISE Authority (WISE Authority) to combine available water supplies and system capacities to create a sustainable new water supply. Through WISE, Aurora Water and Denver Water will provide up to 10,000 AFY (on average) of fully treated water to the WISE Authority for distribution to its members on a permanent basis. Aurora's Prairie Waters system will provide the infrastructure for delivering water from the South Platte when Aurora and Denver Water have available water supplies and Aurora's Prairie Waters system has available capacity. WISE will also enable Denver Water to access its supplies as a new emergency and backup supply. Denver Water and Aurora Water will supply water to the WISE Authority at a master meter located near Aurora's Binney Water Purification Facility (BWPF). The WISE Authority and its members will develop infrastructure within their area for distribution to their members.

To distribute WISE water to its members, the WISE Authority is developing the Western Pipeline system (see attached map: WISE Project Conveyance Alignments). The backbone of this system is the Western Pipeline recently purchased by the WISE Authority and Denver Water from ECCV. However, ECCV retained 8 MGD of capacity in the pipeline to move Denver Basin Aquifer water from the Willows Wells to their service area. In order to maximize the use of this existing piece of infrastructure and conjunctively use nonrenewable groundwater and renewable WISE water, treatment and additional pipeline infrastructure needs to be constructed. A treatment facility providing chloramine disinfection and iron and manganese removal for the groundwater is needed in order to comingle this water with WISE water in the Western Pipeline.

The WISE Authority is seeking a WSRA grant to help with the construction of the infrastructure needed to allow conjunctive use of the Willows Wells and WISE water within the Western Pipeline system. This infrastructure includes a treatment plant and piping needed to by-pass an existing pump station. This infrastructure is estimated to cost \$6.4 million. The WSRA grant is for 14% of the construction cost (see attached Initial Budget Table).

Construction of this infrastructure is necessary for the full implementation of the WISE Partnership, and will maximize the use of the existing Western Pipeline, by allowing the conjunctive use of Denver Basin Aquifer water with renewable surface water. Ultimately, this will allow South Metro entities to change the way they use the Denver Basin Aquifer, going from an unsustainable base supply to a sustainable and conjunctively used drought supply.

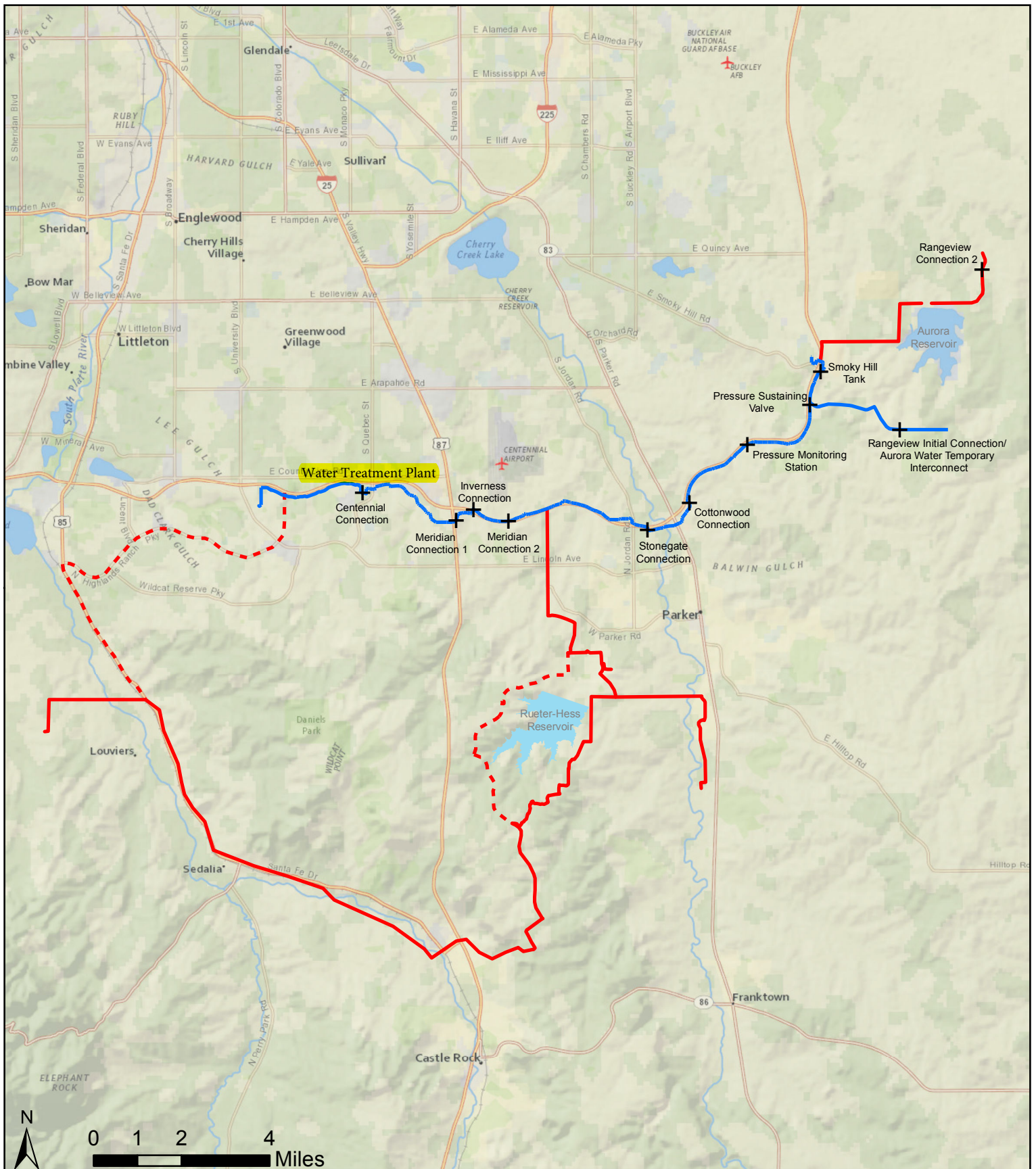
### Grant Proposal and the State Water Planning Process

Throughout the SWSI, BRT, and State Water Planning processes, the CWCB has consistently emphasized two objectives: 1) supporting projects/solutions that reduce the M&I Gap; and 2) supporting the implementation of local water providers' identified projects and processes (IPPs). The WISE Partnership and this grant application help accomplish both of these objectives.

The Metro/South Platte BIP identified the South Metro area as a significant gap area due to the combination of growing M&I demands and the need to replace current uses of non-renewable groundwater. The WISE Partnership will provide a sustainable renewable water supply to 10 South Metro entities and reduce the area's M&I gap.

The WISE Partnership is also an important IPP for the Metro Roundtable as recognized in the Metro/South Platte BIP. This grant application is not only consistent with the BIP, but it helps implement an important IPP in a manner consistent with the BIP's overarching themes and key plan elements.

Finally, this grant application will help allow the conjunctive use of groundwater and surface water through the maximum utilization of existing infrastructure. Maximum utilization of existing infrastructure is a theme throughout the Metro/South Platte BIP. In addition, the BIP recognizes the opportunity to conjunctively use the Denver Basin Aquifer with renewable surface water supplies in order to provide a sustainable and secure water supply. This grant application not only is consistent with this concept, but helps implement a key piece of infrastructure needed to turn the concept into reality.



# WISE Project Conveyance Alignments

- Existing Pipelines
- Proposed Pipelines
- Possible Alternative Alignments

**WISE Conjunctive Use Infrastructure WSRA Grant****Initial Budget Tables****4/15/15****Budget**

<b>Chloramine Disinfection and Iron and Manganese Removal Treatment Facility including By-Pass:</b>	
Site:	
< Mobilization	\$ 176,601.31
< Drainage	\$ 55,066.92
< Access Roads	\$ 150,799.48
< Excavation, Fill, Backfill and Grading	\$ 375,645.13
< Site Restoration	\$ 75,155.60
< Connections to Existing Pipelines	\$ 73,198.48
< Yard Piping / Buried Valves	\$ 275,065.35
Treatment System (including pressure filter vessels, piping, valves, analyzers, (backwash wastewater equalization tank, chemical feed pumps/piping/controls/other, ammonium sulfate storage, feed facilities for chloramination, etc.)	\$ 1,759,948.01
Install Pump Station By-Pass and Accessories	\$ 187,958.53
Chloramine Disinfection System	\$ 275,797.22
Treatment System Start-up and Acceptance Testing	\$ 20,440.20
Building (architectural, structural)	\$ 1,055,010.30
Electrical System	\$ 1,746,000.00
Treatment System I&C/SCADA Equipment	\$ 148,000.00
Record Drawings	\$ 3,000.00
Start-up and Commissioning (O&M Manuals)	\$ 25,335.08
<b>Total</b>	<b>\$ 6,403,021.62</b>

**Funding Sources**

<b>WSRA Grant</b>	
WSRA Statewide Funds	\$ 800,000.00
WSRA Basin Funds	
Metro BRT	\$ 40,000.00
South Platte BRT	\$ 15,000.00
North Platte BRT	\$ 10,000.00
Arkansas	\$ 10,000.00
Colorado BRT	\$ 10,000.00
Yampa/White	\$ 10,000.00
Gunnison	\$ 10,000.00
<b>Total WSRA</b>	<b>\$ 905,000.00</b>
<b>Cash Match</b>	<b>\$ 5,498,021.62</b>
<b>Total</b>	<b>\$ 6,403,021.62</b>

**Grant Statistics**

Applicant Cash Match of Statewide Fund (%)	687.3%
Applicant Cash Match of Total WSRA Funds (%)	607.5%
Basin Match of Statewide Funds (\$)	\$ 105,000.00
Basin Match of Statewide Funds (%)	13.1%
WSRA Grant % of Total Construction Cost	14.1%