*Project Name

Regional Aquifer Storage Recovery Groundwater Model

*Grant Recipient

South Metro Water Supply Authority

*Primary Contact

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*MRT WSRF Grant Type

Conceptual Projects - In Basin and Transbasin
Implementation of IP&Ps

Eligible Water Activities (Check All That Apply)

Municipal/Industrial

If other, please explain.

(No response)

Total Project Cost

$ 184,035.00

*MRT WSRF Grant Amount Request

$ 153,026.00

Colorado Water Plan Grant Amount Request (if any)

(No response)

Other Basin Roundtable WSRF Funding Being Requested (if any)

(No response)

If Other Roundtable Requests, which roundtable(s)

(No response)

*Project Description

Numerous conversations have been held with SMWSA members and other regional providers (e.g., Denver Water and Aurora Water) on the benefits of a South Metro ASR Regional Model. Such a model will support informed decision making, particularly on using ASR to store renewable surplus supplies when deliveries exceed demands and then to draw upon the stored reserves when needed. The model will serve as a tool to evaluate ASR operational scenarios; better understand ASR related infrastructure needs; and assist in addressing questions pertaining to hydrogeology, potential ASR operations, well interactions, accounting, permitting, etc. The following three water providers have been identified as ASR “Hubs” for incorporation into the South Metro Regional ASR Model: East Cherry Creek Valley Water and Sanitation District, Centennial Water and Sanitation District, and the Town of Castle Rock. The South Metro ASR Regional Model will be designed to assist in investigating the feasibility, opportunities, and limitations of an integrated three-Hub regional ASR system. This current phase, Phase 1, focuses on the development of the conceptual model. The South Metro Conceptual Model will include the compilation of a broad spectrum of technical data including groundwater levels; aquifer properties such as transmissivity, hydraulic conductivity, well yields; location of wells and neighboring wells (as feasible); operational capacity; and delivery limitations. These data will form the technical platform necessary to develop and calibrate a numerical model (to be developed in Phase 2). The numerical model will be

constructed to simulate ASR operations in the three designated Hubs. Modeling scenarios will be developed to further understand the opportunities and limitations of a multi-hub integrated ASR system in the South Metro area.

*Which MRT priorities does the project address? How?

GOAL 1: Encourage implementation of projects - This will inform South Metro how they can implement large scale ASR and maximize local storage. GOAL 2: Maximize development of native South Platte supplies - This project will allow South Metro to fully utilize their WISE deliveries. GOAL 3: Maintain and improve M&I efficiency - This project will allow us to eliminate the evaporative losses of stored water GOAL 4: Maintain and promote reuse (opportunity to store WISE and other renewable reuse water) - This project will allow us to maximize WISE water deliveries, which is a large scale indirect potable reuse project.

*Project Timeline and Tasks

April 23rd, 2023 - Grant Award April/May, 2023 - Kick-off & data collection June, 2023 - Data Collection & Kick-off on Conceptual Model July, 2023 - Conceptual Model & Wrap Up of Data Collection Aug/Sep, 2023 - Conceptual Model Results Oct, 2023 - Synthesis of Conceptual Model Results & Documentation Nov/Dec, 2023 - Project Wrap Up

Attach Budget (not required)

(No response)

Attach a map, graphic, etc. (not required)

(No response)

Attach a File (not required)

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