

EXECUTIVE SUMMARY

Date: April 30, 2017

WATER ACTIVITY NAME – South Platte Roundtable Data Platform

GRANT RECIPIENT – Open Water Foundation

FUNDING SOURCE – South Platte Basin Water Supply Reserve Fund; Statewide Water Supply Reserve Fund

INTRODUCTION

The purpose of this project is to implement a web-accessible data platform that can be used by Roundtable members to facilitate the work of the Roundtable. This platform will utilize existing datasets and open technologies to implement processes to integrate datasets from multiple original sources. Data products and visualizations will provide context and explain water resources issues in the South Platte. The project will focus on fundamental datasets such as lists of municipalities, water providers, ditch companies, and large industries in the basin, and datasets that provide insight on multi-faceted water issues that evolve over time. The datasets will be made available in forms usable by Statewide Water Supply Initiative (SWSI) Update, Basin Implementation Plan (BIP), and other projects. Visualizations will be implemented to emphasize important issues for each sector (agriculture, recreation, environment, municipal and industrial). The project will leverage previous and ongoing work from OWF and its collaborators and will be coordinated with other projects. The project will enhance the ability of the Roundtable to tell its story to other roundtables and the public through the use of data-driven stories. The project will result in an open platform that can be evaluated by the Roundtable and enhanced.

The project addresses all of the WSRF Funding Categories as described in the South Platte Basin Roundtable Water Supply Reserve Fund (WSRF) Program Guidelines (p. 8):

- Category 1 – Develop or advance multi-purpose water supply projects – project will illustrate interrelated water resources issues by linking datasets and visualizations
- Category 2 – Improve municipal and industrial water efficiency – project will improve access to water use efficiency data and provide access to water efficiency plan data to illustrate progress and opportunities
- Category 3 – Sustain irrigated agriculture – project will illustrate changes in agriculture, and list ATM and urban/agricultural water rental programs
- Category 4 – Protect and enhance the environment and water-based recreation – project will build on BIP Environmental and Recreational work to illustrate environmental flow needs and challenges
- Category 5 – Promote education and outreach that emphasizes the South Platte BIP priorities – project results can be used by education and outreach efforts to explain South Platte water issues and solutions

This Executive Summary details how the project will satisfy the application criteria as described in each section below.

SECTION 1 – Promotes South Platte Basin Implementation Plan (BIP)

The South Platte BIP identifies needs and opportunities in agricultural, municipal, industrial, environmental, and recreational sectors. Although each of these sectors must receive proper attention, there is also a need to emphasize the relationships between these sectors and consider the Basin as a system. This project will improve access to foundational datasets for each sector and help connect the dots on integrated issues by demonstrating connections between datasets. By improving access to data and using visualizations to explain water resource issues in the basin, the Roundtable will be able to more directly address issues throughout the basin and explain its position to other roundtables. This project will help the Roundtable do the work of the Roundtable by being more effective and efficient. The project will promote the South Platte BIP by helping to quantify and prioritize water supply issues and can help identify which issues should receive funding through Roundtable funding programs. The project results will also provide a technical foundation for education, for example to illustrate which municipal water providers have water efficiency plans and active agricultural water rental programs.

SECTION 2 – Project Urgency and Readiness

South Platte Roundtable members have been involved in a sequence of major studies including SWSI, BIP, Colorado Water Plan, HB 1278 Groundwater Study, and other studies. Through this process old datasets have been reused due to resource and time constraints, some datasets have been updated, and in some cases significantly new innovation has occurred. However, access to datasets has been limited and ultimately study results have been provided via long PDF documents. This approach hinders the Roundtable's ability to understand the needs of the basin and do the work of the Roundtable. This project seeks to shine light on data and analysis by establishing a platform of datasets that are accessible to Roundtable members and the public. The project will utilize existing datasets and open technologies and will leverage previous and ongoing work to provide datasets in an accessible and integrated fashion. Standard automated processes will be put in place to transform data from original sources into forms that are useful to the Roundtable and public. Data visualizations will also be implemented to help understand the datasets in the context of issues in the basin.

The urgency for this project is to ensure that another major study cycle does not occur and miss an opportunity for the Roundtable to more easily access data used in such studies. Recent progress in South Platte Decision Support System modeling, data collection, and software updates provide an opportunity to implement improved data and analysis solutions now. It is also important to improve upon the messaging of the Roundtable, in order to discuss water issues with other roundtables and stakeholders.

OWF can begin the project immediately upon award and can build on previous projects, with little time needed to ramp up. The project does not require any acquisitions of property or easements or the use of permits or licenses. The project is expected to be completed within 9-12 months.

SECTION 3 – Matching Funds

The project's total cost of \$146,386 is summarized in the table below, organized by tasks as described in the Statement of Work. OWF is requesting \$40,000 from the South Platte Basin Water Supply Reserve Fund and \$60,000 from the Statewide Water Supply Reserve Fund. OWF has secured funds from a number of sources that can contribute to this project. In particular, OWF is working on a \$50,000 project for the S.D. Bechtel Jr. Foundation, which focuses on improving collaboration with water resources data and can directly benefit the proposed project. OWF has also listed in the application several other CWCB projects that have laid the

foundation for the proposed project or are pending, including a \$50,000 project with the Colorado Water Institute focusing on open data and visualization and \$25,000 to enhance CDSS tools to use new HydroBase web services. OWF is also pursuing other funding from federal grants and private foundations to continue work related to open data, transparency, and data visualization. In addition to these funding sources, OWF can contribute in-kind services if necessary, although it is hoped that the above matching funds are sufficient.

Budget Summary			
Task	Cost	Allocation of Private Funds	Allocation of WSRF Funds
Task 1 - Create Initial Inventory of Key Datasets, Source Entity, Data Format, and Accessibility	\$11,900	\$11,900	
Task 2 - Create Initial Prototype Website	\$24,600	\$24,600	
Task 3 - Implement Processes to Transfer Data from Original Source to South Platte Roundtable Data Platform	\$31,100	\$9,886	\$21,214
Task 4 - Implement Visualizations for Dataset	\$31,300		\$31,300
Task 5 - Develop Integrated Stories	\$25,600		\$25,600
Task 6 - Public Involvement and Outreach	\$5,100		\$5,100
Task 7 – Reporting and Final Deliverable	\$8,500		\$8,500
Subtotal	\$138,100		
Administrative Costs	\$8,286		\$8,286
Project Total	\$146,386		
		Total WSRF Funds:	\$100,000

SECTION 4 – Measurable Outcomes

This project will get at the heart of measurable outcomes by improving access to the datasets that are used in BIP and SWSI analysis and helping consumers of the data at multiple levels understand measureable outcomes. Much of the challenge with SWSI, BIP, and other studies has been accessing data that provides enough spatial and temporal context to understand the scale of problems and solutions... how they change over time, relative size of impact, whether a chronic or acute issue, etc. This project will increase transparency and improve understanding of data sources, data quality, and gaps. Rather than prematurely aggregating data, this project will utilize detailed data as much as possible, flag data limitations, and publish datasets that help point out where gaps need to be overcome. This project will help the Roundtable to better understand water issues and opportunities, and will help the Roundtable make recommendations based on best available data. The Statement of Work provides many examples of datasets that can be published to help understand issues and help the Roundtable message those issues to the public. The project approach will result in datasets and processes that can be easily updated.

Other measurable outcomes are the number of datasets and visualizations made available as part of the data platform.