COLORADO
Colorado Water Conservation Board
Department of Natural Resources

1313 Sherman Street
Denver, CO 80203

P (303) 866-3441
F (303) 866-4474

John Hickenlooper, Governor

Robert Randall, DNR Executive Director

Rebecca Mitchell, CWCB Director

TO: Colorado Water Conservation Board Members

FROM: Greg Johnson, Water Supply Planning Section

DATE: November 15-16, 2017 Board Meeting

AGENDA ITEM: 29 a-c. Water Plan Grants – Supply and Demand Gap Projects Initial Consideration

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This item is for consideration only. No action is required at this time

Introduction

The Supply and Demand Gap Projects funding category of Water Plan Grants was allocated $2 million for FY2018. For this second round of applications for initial consideration we received three new applications totaling $646,500, along with one new notice of intent to apply. Staff is supporting all three of the current applications for the full amount as noted in the table below.

When combined with the previously recommended applications from the September 2017 meeting under final review at this meeting (totaling $988,051), the remaining fund balance available for the third and final round of funding this fiscal year would be $365,449 (if applications are approved per staff recommendation).

Applicant	Project Name	Request	% of Project	Staff Support
a. Town of Firestone Water Activity Enterprise	Modeling Reservoir Operations for Direct Reuse	$71,500	45%	$71,500
b. Aurora-Colorado Springs Joint Water Authority	Homestake Arkansas River Diversion Improvements	$500,000	7%	$500,000
c. St. Charles Mesa Water District	Long-Term Potable Water Supply to the Zinno Subdivision	$75,000	6%	$75,000

See attached Data Sheets for locations and summaries.

Staff Review and Comments

a. Town of Firestone Water Activity Enterprise - Modeling Reservoir Operations for Direct Reuse

The Town of Firestone is seeking to reuse Windy Gap return flows by directly piping effluent from the St Vrain Sanitation District (SVSD) Wastewater Plant to Firestone Reservoir (or other reservoirs). As the supply of Windy Gap return flows grows over time, and as the Town develops other fully consumable water rights, recapturing or exchanging the reusable water will be a critical water supply component. Firestone has a goal of employing direct reuse of Windy Gap, NISP and other augmentation credits to meet 25 percent of its 2047 water demand. To effectively use these return flows along with other supplies that the Town is evaluating for purchase, the Town must evaluate how the Firestone Reservoir

(or reservoirs) will operate. Therefore, Firestone is seeking water plan grant funding to create an operations model for the reuse reservoir(s).

Staff supports recommending a $71,500 grant to the Town of Firestone Water Activity Enterprise for approval at the January 2017 meeting.

b. Aurora–Colorado Springs Joint Water Authority - Homestake Arkansas River Diversion Improvements

The Aurora-Colorado Springs Joint Water Authority (Authority) is implementing the Arkansas River Diversion Improvement Project to provide multiple benefits by reconstructing the diversion and intake to ensure diversion reliability, provide fish and boat passage, and reduce risk to recreational users. The current conditions limit diversion reliability and present a river navigation hazard that requires recreational users to portage. The Project, as identified in multiple Basin Implementation Plans, will help meet existing and future municipal water needs by improving the reliability and resiliency of the Homestake Water Project to deliver water through existing infrastructure to Aurora and Colorado Springs. These water deliveries include new supplies via multiple decreed exchanges totalling up to 20,000 acre-feet annually.

Staff supports recommending a $500,000 grant to the Aurora–Colorado Springs Joint Water Authority for approval at the January 2017 meeting.

c. St. Charles Mesa Water District - Long-Term Potable Water Supply to the Zinno Subdivision

The St. Charles Mesa Water District (SCMWD) is seeking water plan grant funds to help bring a long term potable water supply to the Zinno Subdivision. The current sole source of water for the subdivision is a shallow 43 feet deep well. Due to poorly maintained infrastructure, power outages, pump failures, and water main breaks the subdivision has experienced numerous interruptions in service. The residents of the Zinno Subdivision are working with SCMWD obtain continuous, quality, potable water service, and stable water rates. The project involves annexing the Zinno Subdivision (97 water taps) into the St. Charles Mesa Water District (SCMWD) service area and constructing a new distribution system, service lines, and meters.

Staff supports recommending a $75,000 grant to the St. Charles Mesa Water District for approval at the January 2017 meeting.

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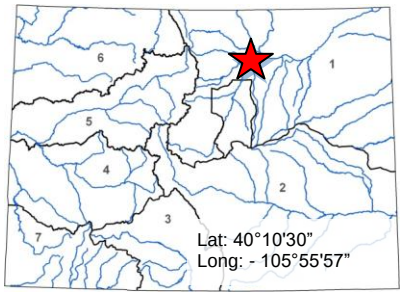
Water Plan Grant Application

Town of Firestone Water Activity Enterprise
Modeling Reservoir Operations for Direct Reuse

November 2017 Board Meeting
Initial Consideration



L O C A T I O N
County: Weld
Drainage Basin: South Platte

D E T A I L S	
Total Project Cost:	$160,100
Water Plan Grant Request:	$71,500
Other CWCB Funding:	$0
Applicant Match:	$89,400
Project Type(s): Study	
Project Categories: Supply & Demand Gap, Conservation and Land Use	
Measurable Result: 2,200 AF new annual water supplies (including 1st, 2nd, 3rd, and 4th reuse)	

The Town of Firestone is seeking to reuse Windy Gap return flows by directly piping effluent from the St Vrain Sanitation District (SVSD) Wastewater Plant to Firestone Reservoir (or other reservoirs). As the supply of Windy Gap return flows grows over time, and as the Town develops other fully consumable water rights, recapturing or exchanging the reusable water will be a critical water supply component. Firestone has a goal of employing direct reuse of Windy Gap, NISP and other augmentation credits to meet 25 percent of its 2047 water demand.

To effectively use these return flows along with other supplies that the Town is evaluating for purchase, the Town must evaluate how the Firestone Reservoir (or reservoirs) will operate. Therefore, Firestone is seeking water plan grant funding to create an operations model for the reuse reservoir(s). The model will help evaluate the reliability of alternate water supply portfolio configurations, including the acquisition of additional NISP and Windy Gap water above and beyond its current allocations (another critical component of its future water supply). It will also evaluate: various supply/demand scenarios, pipeline capacity estimates, how to facilitate 2nd, 3rd, and 4th reuse opportunities, and ways to incorporate additional reusable effluent from partner entities.

In addition, the project will support Firestone's use of alternative transfer methods (ATMs). The Town has historically leased CBT water that is not needed in a given year, on a year-by-year basis, after Northern Water releases its supplemental quota. Firestone would like to be able to consider multi-year or interruptible leases as it develops more storage and reuse supplies. The model will help estimate excess CBT available for agricultural leases under alternate configurations as well as the need for additional storage to maximize reuse and minimize buy-and-dry.

The direct use pipeline will be about 4,000 feet in length with a 1st reuse supply of 800 af/year and total reuse capacity of 2,200 af/year (including 2nd, 3rd, and 4th reuse). Collaboration with other entities with Windy Gap reusable flow in the St Vrain Sanitation District WWTP may increase this amount.

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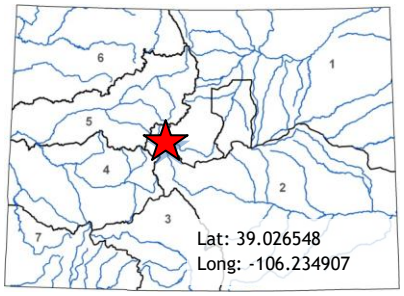
Water Plan Grant Application

Homestake Arkansas River Diversion Improvements
Aurora-Colorado Springs Joint Water Authority

November 2017 Board Meeting
Initial Consideration



LOCATION	
County: Chaffee	
Drainage Basin: Arkansas	

DETAILS	
Total Project Cost:	$7,650,000
Water Plan Grant Request:	$500,000
Other CWCB Funding:	$69,847
Applicant Match:	$6,650,000
Project Type(s): Construction/IPP	
Project Categories: Supply & Demand Gap, Environmental & Recreational	
Measurable Result: Up to 20,000 AF new annual water supplies; 600 LF restored stream; 1.37 acres restored habitat	

The Aurora-Colorado Springs Joint Water Authority (Authority) is implementing the Arkansas River Diversion Improvement Project to provide multiple benefits by reconstructing the diversion and intake to ensure diversion reliability, provide fish and boat passage, and reduce risk to recreational users. The Arkansas River Diversion (ARD) is located on the Arkansas River near Twin Lakes, below the town of Granite, Colorado. It was constructed in 1965 as the original intake for the Otero Pump Station of the Homestake Project constructed by Aurora and Colorado Springs. In the 1980's the main Homestake intake pipeline was extended to Twin Lakes. The ARD has since operated as a backup facility and has subsequently deteriorated. The current conditions limit diversion reliability and present a river navigation hazard that requires recreational users to portage.

The Project, as identified in multiple Basin Implementation Plans, will help meet existing and future municipal water needs by improving the reliability and resiliency of the Homestake Water Project to deliver water through existing infrastructure to Aurora and Colorado Springs. These water deliveries include new supplies via multiple decreed exchanges totalling up to 20,000 acre-feet annually. Colorado Springs Utilites has identified one of these exchanges that focuses on the use of water from alternative agricultural transfers as an integral part of its Integrated Water Resource Plan. In addition, since the structure is one of only two ways to operate the Homestake Pipeline, it provides important redundancy and drought resiliency by allowing diversions when Twin Lake storage levels are too low to operate its intake pipeline. As such, the project addresses multiple goals and objectives identified in the Colorado Water Plan and multiple Basin Implementation Plans.

The Authority has worked with Colorado Parks and Wildlife (CPW) and the Arkansas Headwaters Recreation Area to address their desire for improved navigability. The structure is currently the only major blockage on the river between Leadville and Pueblo Reservoir. The Authority is also seeking Water Plan Grant funding from the environmental and recreational category to specifically address the fish and boat passage components of the project. In addition, CPW has committed matching funds in the amount of $500,000.

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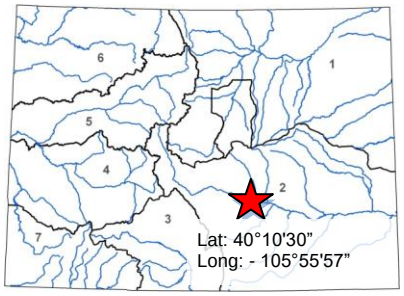
St. Charles Mesa Water District
Long-Term Potable Water Supply to the Zinno Subdivision

November 2017 Board Meeting
Initial Consideration

Water Plan Grant Application



L O C A T I O N	
County: Pueblo	
Drainage Basin: Arkansas	

D E T A I L S	
Total Project Cost:	$1,180,587
Water Plan Grant Request:	$75,000
Other CWCB Funding:	$124,950
Applicant Match:	$284,343
Project Type(s): Construction	
Project Categories: Supply & Demand Gap	
Measurable Result: 77 AF conserved supplies via SCMWD Conservation Plan	

The St. Charles Mesa Water District (SCMWD) is seeking water plan grant funds to help bring a long term potable water supply to the Zinno Subdivision. The current sole source of water for the subdivision is a shallow 43 feet deep well. Due to poorly maintained infrastructure, power outages, pump failures, and water main breaks the subdivision has experienced numerous interruptions in service. In addition, the residents have complained about the poor water quality coming from their tap which is considered by most to be undrinkable. Due to the precarious nature of the water service, the residents of the Zinno Subdivision are working with SCMWD obtain continuous, quality, potable water service, and stable water rates. SCMWD is willing to assist by including the subdivision in their District boundaries and constructing the necessary new infrastructure.

The project involves annexing the Zinno Subdivision (97 water taps) into the St. Charles Mesa Water District (SCMWD) service area and constructing a new distribution system, service lines, and meters. SCMWD will then provide water to the subdivision using their available water rights.

Water plan grant funds would be used for planning the integration of the Zinno Subdivision into the St. Charles Mesa Water District including: annexation, documents required for CDPHE approval, geotechnical testing, surveying, engineering design, and contracting documentation. Then, other funding from the applicant, CWCB's Water Supply Reserve Fund, CWCB's Water Efficiency Grant Program, Pueblo County, Colorado Department of Local Affairs, Colorado Water Resources and Power Development Authority, and USDA will be used for project construction. This project supports numerous objectives of the Colorado Water Plan and the Arkansas Basin Implementation Plan.