COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Dominion Water & Sanitation District	
Name of Water Project	South Platte Diversion Infrastructure Design	
Grant Request Amount		**$1,281,424.00**
Primary Category		$1,281,424.00
Water Storage & Supply		
Total Applicant Match		**$427,140.00**
Applicant Cash Match		$427,140.00
Applicant In-Kind Match		$0.00
Total Other Sources of Funding		**$0.00**
Total Project Cost		**$1,708,564.00**

Applicant & Grantee Information

Name of Grantee: Dominion Water & Sanitation District
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Description of Grantee/Applicant

Dominion Water & Sanitation District (Dominion or DWSD) is a Title 32 Special District authorized to provide wholesale water and wastewater services to retail customers in northwest Douglas County. Dominion is the wholesale water and wastewater provider for Sterling Ranch Development and administrator of the state's first

precipitation pilot program at Sterling Ranch. Formed in 2004, Dominion has a mission to provide a new conjunctive use water supply that is seventy percent renewable, to an area with limited renewable water supply sources in accordance with the goals set in Douglas County's 2030 Comprehensive Master Plan.

Type of Eligible Entity

- ☐ Public (Government)
- ■ Public (District)
- ☐ Public (Municipality)
- ☐ Ditch Company
- ☐ Private Incorporated
- ☐ Private Individual, Partnership, or Sole Proprietor
- ☐ Non-governmental Organization
- ☐ Covered Entity
- ☐ Other

Category of Water Project

- ☐ Agricultural Projects
  Developing communications materials that specifically work with and educate the agricultural community on headwater restoration, identifying the state of the science of this type of work to assist agricultural users among others.
- ☐ Conservation & Land Use Planning
  Activities and projects that implement long-term strategies for conservation, land use, and drought planning.
- ☐ Engagement & Innovation Activities
  Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application on the website.
- ☐ Watershed Restoration & Recreation
  Projects that promote watershed health, environmental health, and recreation.
- ■ Water Storage & Supply
  Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging existing reservoirs to restore the reservoirs' full decreed capacity and Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap.

Location of Water Project

Latitude	39.486247
Longitude	-105.096991
Lat Long Flag	Precise coordinates: Project coordinates are readily definable and precisely define the location of the project
Water Source	South Platte River
Basins	Metro
Counties	Douglas
Districts	8-South Platte Cheesman to Denver Gage

Water Project Overview

Major Water Use Type	Municipal
Type of Water Project	Design / Engineering
Scheduled Start Date - Design	9/16/2024

Scheduled Start Date - Construction 7/1/2026

Description

The proposed project for Dominion Water & Sanitation District (Dominion) aims to augment the District's water supply to meet projected demands for future growth by developing new native South Platte River and reusable supplies. The project involves diverting water from the South Platte River downstream of a future wastewater treatment plant's discharge. This includes water rights owned by the District in the South Platte River and return flows from the future plant. The diversion will convey up to 5 cubic feet per second (cfs) through an intake to a pump station. From there, raw water will be transported approximately 3 miles via a new 16-inch pipeline. The pipeline will traverse major roadways and a drainageway, ultimately supplying raw water to the Larry D. Moore Water Treatment Plant. This project is a critical piece of infrastructure that will allow Dominion to develop over 2,500 acre-feet of new renewable water supplies by optimizing existing water rights, contracts, storage, and conveyance infrastructure while maximizing the use of existing native South Platte supplies.

The project is broken into two phases: Phase 1) design and engineering, and; Phase 2) construction. Dominion is currently seeking funding for the design and engineering phase of the project.

Measurable Results

0	New Storage Created (acre-feet)
2,500	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
500	Existing Storage Preserved or Enhanced (acre-feet)
0	New Storage Created (acre-feet)
470	Length of Stream Restored or Protected (linear feet)
16,368.00	Length of Pipe, Canal Built or Improved (linear feet)
	Efficiency Savings (dollars/year)
	Efficiency Savings (acre-feet/year)
	Area of Restored or Preserved Habitat (acres)
	Quantity of Water Shared through Alternative Transfer Mechanisms or water sharing agreement (acre-feet)
	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
	Number of Coloradans Impacted by Engagement Activity

Other

Volume of renewable water supplies developed by the project that offsets the need for non-renewable groundwater: > 2,500 acre-feet/yr

Water Project Justification

The design of the South Platte Diversion Structure supports the goals of the Colorado Water Plan and accompanying Technical Update as well as the South Metro/Metro Basin Implementation Plan and the State's education efforts. This is described in further detail below.

South Platte/Metro Basin Implementation Plans

• Goal 1 (page 69): Encourage Implementation of Projects- The South Platte Basin will encourage the implementation of identified projects (IPP) that meet existing and future municipal and industrial, agricultural, and environmental/recreational water needs. Although not called out explicitly as an IPP, Dominion's South Platte Diversion is one of the alternatives identified in the Chatfield Westside Alternatives IPP for conveying new firm yield from Chatfield Reservoir.

o 1.A (page 61): Promote implementation of identified projects for all water user categories, with emphasis on Tier 1, Tier 2, and Tier 3 projects.

Based on the South Platte/Metro BIP criteria (page 95), the design and construction of the South Platte Diversion Project is a Tier 2 project because it aligns with the Basin Implementation Plan and will be ready for construction within two years, should funding be made available. To date, some local planning and organization have already been completed for this project that benefits multiple sectors identified in the Colorado Water Plan including Municipal & Industrial and Environment & Recreation. Finally, the South Platte Diversion Project is a significant basin effort that advances the South Platte basin's goals and has clear metrics for tracking progress.

• Goal 2 (page 71): Maximize Development of Native South Platte Supplies- The South Platte Basin will collaboratively develop new projects to maximize the use and effectiveness of existing native surface and groundwater supplies.

The South Platte Diversion is a critical piece of infrastructure that allows Dominion direct access to existing water supply contracts, junior water rights, exchange from storage in Chatfield Reservoir, as well as capture of return flows from wholly consumable water supplies. Maximizing both native South Platte supplies and the reuse of existing and future water deliveries from WISE, contractual supplies, groundwater, and other supply sources. The South Platte diversion will significantly increase Dominion's ability to physically access legally available water supplies while simultaneously maximizing the use of existing storage in Chatfield Reservoir. Ultimately, the project will help the region meet its sustainability goals by reducing reliance on groundwater and strengthening the region's water supply security for many years to come.

o 2.A (page 71): Collaboratively develop multi-purpose (e.g., municipal, industrial, agricultural, environmental, and recreational) projects. These projects may include storage, conveyance, and system interconnections that promote basin-wide water use efficiency and enhance supply reliability while maintaining compliance with the prior appropriation doctrine.

Since 2004, Dominion has worked collaboratively to develop every aspect of its raw water and wastewater system. During this early project stage, Dominion has met with a significant consortium of entities including: Denver Water, Aurora Water, Roxborough Water & Sanitation District, Castle Rock Water, Chatfield Watershed Authority, Colorado Division of Water Resources, Colorado Department of Health and Environment, Sterling Ranch Community Authority Board, South Metro Water Supply Authority, the Colorado Parks Foundation, and the Greenway Foundation to discuss the project. Although the primary purpose of the facilities is for municipal use. Dominion recognizes the importance of collaboration and promotion of solutions that support efficient water use, comply with the prior appropriation doctrine, protect water quality, enhancement of stream health, and provide recreational opportunities.

o 2.C (Page 71): Encourage the sharing of data and information related to best practices, effective methods, and technological advancements that support the maximized use of existing native South Platte supplies.

The proposed modern design of the South Platte diversion utilizes natural materials for the control and diversion of flows into a screened vault where the water will then be conveyed to the pump station and pipeline. This purposely simple design is highly effective while minimizing disturbances to the stream channel. The design and construction of the project will follow best practices, methods, and requirements outlined by the County, State, and Dominion's Rules and Regulations. The structure will be equipped with the latest technical advancements supporting the efficient operations, control, and measurement of available flows. All compiled information and design documents will be made available to interested parties.

The location of the Project provides many complexities in water administration. To meet concerns and ensure that no injury to senior users is conducted, Dominion will equip flow monitors to measure the streamflow above

the diversion, the diversion, as well as the wastewater outfall upstream of the diversion. Monitoring information will be publicly available as required by decree, helping both Dominion and other water users optimize the use of existing water supplies above in and above Chatfield Reservoir. Further, Dominion's decreed water right at the location of the diversion is ten percent more than it will ever divert. In the design, monitoring plan, and stakeholder engagement Dominion is demonstrating its commitment to protecting the river and minimizing impacts to other users.

• Goal 3 (Page 72): Maintain and Promote Municipal and Industrial Conservation and Efficiency- Municipal and industrial water users in the Metro and South Platte Basins will maintain their leadership role in conservation in the state of Colorado, recognizing that limited water supplies and a robust population drive the application of conservation best practices within the basin and throughout the state. Future conservation and efficiency efforts can reduce adverse environmental and social impacts of new supply development, help mitigate the impacts of climate change, and also maintain or improve valuable environmental and social benefits of urban landscapes

o 3.C (Page 72): Encourage innovation and efficiency improvements

One goal of the Project is to improve the operational flexibility and efficiency of Dominion's system. Specifically, the Project will allow Dominion the ability to develop, when legally available, its native South Platte River supplies and reusable water supplies. The South Platte Diversion is located just downstream of the Chatfield Water Reclamation Facility's (CWRF) discharge. Anticipated to begin construction in 2025, the CWRF will convey and treat wastewater from Sterling Ranch, Louviers, Sedalia, and other customers along Plum Creek. These flows are 100% reusable by decree and will result in a significant source of water supplies for the region. Reuse generated from CWRF will be discharged to the South Platte River, the South Platte Diversion will then allow Dominion to capture legally available return flows for treatment and delivery to its customers. This important operation known as indirect potable reuse provides Dominion the ability to maximize the use of existing water supplies to meet the needs of its customers. This practice is becoming a standard in the State resulting in a more efficient practice that protects against climate change and supports system resiliency. Strategically constructing the diversion downstream of CWRF discharge further protects the integrity of Waterton Canyon and the South Platte River by ensuring flows are not impacted.

• Goal 7 (page 88): Protect and Enhance Environmental Attributes- Throughout the South Platte Basin, the importance of ecological processes and environmental attributes will be fully recognized. The South Platte Basin will implement strategies that protect and enhance environmental attributes for ecologically, socially, and economically important habitats and focus areas.

o 7.A (page 88): Continue to develop, promote, and apply best management practices, tools, and methodologies to adequately assess what is needed to maintain, increase, or enhance the following throughout the South Platte Basin: • General river health • Aquatic, riparian, floodplain, wetland, and wet meadow habitats • Instream flows • Water quality and impacts associated with temperature and other pollutants • Riverine connectivity, including biological, hydrological, geomorphological processes, and stormwater impacts

Dominion recognizes that protecting and enhancing the stream as well as the stream corridor is important to the successful design and construction of the South Platte Diversion. The proposed project will indirectly improve general river health due to restoration, stream bank protection, and fish passage work that will be required as a part of the design. Areas adjacent to the river and pipeline alignment will also be improved to reduce or mitigate erosion and sedimentation resulting in improved drainage and overall water quality returning to the stream.

• Goal 9 (page 91): Support collaborative development and management of supply options outside of the South Platte Basin- The South Platte Basin will work collaboratively with the state of Colorado and entities in other

basins, including the Colorado Basin, to develop and manage all water supplies for the benefit of the entire state.

This project benefits from its collaborative approach by providing new opportunities for diverse stakeholders to effectively manage a shared resource. The proposed stream monitoring stations as well as the improvements to the banks will provide increased data for Dominion which will be shared with other stakeholders. This will provide an opportunity to improve water supply management in and above Chatfield Reservoir. Dominion's commitment to collaborating with other stakeholders by providing stream monitoring data as well as improved access to the river will likely result in greater efficiencies in water supply management. Monitoring the water quality within the stretch and at the project site will also provide valuable data that can be used to protect the health of the South Platte River.

Colorado Water Plan

According to the Colorado Water Plan, "Approximately 70% of the state's population is located along the Front Range in the South Platte Basin and it is projected to continue to grow in the future." (page 118) As such, it is important to accurately and efficiently manage the water in this basin. The design of the diversion structure exemplifies many aspects of the Colorado Water Plan's vision and action area. The following discussion describes specific partner action categories that this project addresses.

• Meeting Future Water Need (page 179): The project aims to improve the efficiency of water infrastructure and use along the South Platte River. Dominion is aware that Colorado's ability to service the future population depends on making smart infrastructure investments now. Developing reliable and resilient infrastructure, like the South Platte Diversion, is vital to ensuring a reliable supply is available for future generations.

• Wise Water Use (page 180): Creating resilient water systems that recognize the connections between social, economic, and environmental sectors is important. Dominion and its customer Sterling Ranch understand this balance and are committed to building a resilient community. As a new vibrant, amenity-rich community, Sterling Ranch is being developed to have some of the lowest water use in the country. The community embraces the paradigm of responsible stewardship and has redefined what it means to be water-wise and use only what you need principles. The result of actions taken like metering indoor and outdoor water uses separately, and providing homeowners the ability to track their actual water usage has resulted in an awareness of the value of water. It has also resulted in a community culture that embraces demand management, water conservation, and efficiency practices. Sterling Ranch has developed tools and incentives that will sustain these practices long-term including dual metering, Rachio irrigation controllers, and water rates that encourage low water use.

• Engaged Partners (page 181): Developing projects that encourage stakeholders and partners to work together and meet a common goal is an important component of the Colorado Water Plan. Throughout the planning and conceptual design of the South Platte diversion structure Dominion has engaged with local, regional, and state partners. Dominion is committed to continuing to engage these partners beyond the construction of the project. This project will encourage these discussions with a common goal of efficiently managing water resources while protecting water quality and the environment.

• Integration with Other Water Sectors (page 181): The concept of "One Water" best describes Dominion's vision and the integration between water sectors. Three key components of Dominion's system intersect with other water sectors. These components include: 1) Water conservation and demand management integrating with irrigation managers and land use planners; 2) Stormwater capture and use integrating with stormwater and water quality managers, and; 3) Wastewater treatment and reusable supplies integrating with permitting agencies, operation managers, and administrators. All with a shared goal of building a robust, sustainable water supply, that protects the environment, and maximizes a shared water resource.

Related Studies

Dominion’s South Platte Diversion was included in the “Chatfield Westside Alternatives Study” or “Chatfield Pumpback Study” (Jacobs Engineering, 2020). The Chatfield Westside Alternatives is listed as an IPP.

Taxpayer Bill of Rights

None.