



COLORADO

Colorado Water Conservation Board

Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	North Poudre Irrigation Company	
Name of Water Project	Park Creek Reservoir Expansion	
Grant Request Amount		\$2,960,210.33
Primary Category		\$2,960,210.33
<i>Water Storage & Supply</i>		
Total Applicant Match		\$1,458,731.63
<i>Applicant Cash Match</i>		\$1,458,731.63
<i>Applicant In-Kind Match</i>		\$0.00
Total Other Sources of Funding		\$6,544,800.00
<i>CWCB Water Project Loan Program</i>		\$6,544,800.00
Total Project Cost		\$10,963,741.96

Applicant & Grantee Information

Name of Grantee: North Poudre Irrigation Company	
Mailing Address: 3729 Cleveland Avenue Wellington CO 80549	
FEIN: 840,281,680	
Organization Contact: Cali Gunter	
Position/Title: Corporate Secretary	Email: cgunter@npcwater.com
Phone: 970-568-3612	
Organization Contact - Alternate: Tad Moen	
Position/Title:	Email: tmoen@npcwater.com
Phone: 970-568-3612	
Grant Management Contact: Cali Gunter	
Position/Title: Corporate Secretary	Email: cgunter@npcwater.com
Phone: 970-568-3612	
Grant Management Contact - Alternate: Tad Moen	
Position/Title:	Email: tmoen@npcwater.com
Phone: 970-568-3612	
Engineering Contact: Tara Schutter	
Position/Title: President	Email: tara@tessarawater.com
Phone: 3037109108	

Description of Grantee/Applicant

North Poudre Irrigation Company is a mutual ditch company that supplies water to an area of northeastern Larimer County and western Weld County in north-central Colorado. We have a long history of serving this part of the state and we're proud of the role our Company has played over the years in supporting the work of local

farmers and ranchers and growing municipalities. The North Poudre Irrigation Company officially came into being in August 1901. The NPIC system includes 19 reservoirs and about 200 miles of delivery canals, ditches, and laterals. Our intent is to keep an agricultural core, serve our current shareholders, and adapt to the water situation of the 21st century.

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	40.836937
Longitude	-105.151951
Lat Long Flag	Precise coordinates: Project coordinates are readily definable and precisely define the location of the project
Water Source	North Fork of the Cache La Poudre
Basins	South Platte
Counties	Larimer
Districts	1-South Platte: Greeley to Balzac

Water Project Overview

Major Water Use Type	Agricultural
Type of Water Project	Design & Construction

Scheduled Start Date - Design 10/3/2022

Scheduled Start Date - Construction 6/3/2024

Description

North Poudre Irrigation Company (NPIC) located in Larimer County, Colorado owns and operates Park Creek Reservoir as an irrigation water storage reservoir for the benefit of the shareholders. The reservoir is northwest of Wellington, Colorado and is located in Section 18, Township 10 North, Range 69 West of the 6th Principal Meridian and has a storage of 7,605 acre-feet.

Park Creek Dam was completed in 1970. The dam consists of a zoned earthen dam including a Zone 1 clay core with a cutoff trench into the underlying bedrock, a sandy lean clay Zone 2, and mixed fill shell Zone 3 with riprap covering the upstream slope for wave protection. Within the downstream embankment, a blanket drain underlies a portion of Zone 2 and Zone 3 and daylight downstream of the dam. The plans indicate a crest width of 20 feet with upstream and downstream slopes of approximately 2.5:1. The reservoir includes a spillway that is located south of the dam. The current dam crest has an elevation of 5824 and the spillway control elevation is 5814.

The proposed Park Creek Reservoir and Dam rehabilitation and expansion will raise the normal water storage level ten feet from 5814 to 5824, providing approximately 3010 ac-ft of additional water storage for a total of 10,615 ac-ft . The dam crest modification increases the dam crest elevation from 5824 to 5832, providing eight feet of freeboard. The concrete spillway is designed to a control elevation of 5824. The proposed Park Creek Reservoir Expansion includes construction of a dam crest wall, concrete spillway structure, monitoring instrumentation, gate house modification, addition of a downstream chimney filter/drain, toe drain, and stability berm.

Increased storage at Park Creek Reservoir provides several advantages including improved water management for agricultural use, increased water storage capacity when water is physically available, and additional wetland and riparian habitat.

The Park Creek Expansion is economically feasible with a cost per acre foot of \$4,050/ac-ft.

Measurable Results

3,010	New Storage Created (acre-feet)
0	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
7,605	Existing Storage Preserved or Enhanced (acre-feet)
3,010	New Storage Created (acre-feet)
0	Length of Stream Restored or Protected (linear feet)
	Length of Pipe, Canal Built or Improved (linear feet)
	Efficiency Savings (dollars/year)
3,010	Efficiency Savings (acre-feet/year)
0	Area of Restored or Preserved Habitat (acres)
	Quantity of Water Shared through Alternative Transfer Mechanisms or water sharing agreement (acre-feet)
250,000	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
250,000	Number of Coloradans Impacted by Engagement Activity
Other	
	innovative design cost savings of 50% per ac-ft of storage from previous studies

Water Project Justification

Increased storage at Park Creek Reservoir provides many advantages including improved water management for agricultural use, increased water storage capacity when water is physically available, additional shoreline wetland and riparian habitat and recreational benefits. The project also provides additional drought carryover water storage and improves the overall water resource management. The Park Creek Reservoir Expansion Project provides economic benefit to over 250,000 people in northeastern Larimer County and western Weld County. NPIC provides water to the cities of Fort Collins and Greeley, and the towns of Ault, Eaton, Nunn, Pierce, Severance, Wellington, and Windsor. Water district stockholders include the North Weld County, East Larimer County, and Fort Collins-Loveland water districts. Over 250,000 people in northeastern Larimer County and western Weld County get their water from our company. About 23,000 acres of agricultural land are irrigated with NPIC water. The proposed rehabilitation and expansion will raise the normal water storage level ten (10) feet, providing approximately 3050 ac-ft of additional water storage. The dam crest is raised eight (8) feet. The construction of a dam crest wall provides the necessary freeboard. The Park Creek Dam water storage expansion project will also include improved risk reduction features to improve the safety of Park Creek Dam and reduce the risk of a dam failure incident. The feasibility study included a potential failure mode (PFM) risk screening workshop on the current dam. During the design phase a PFM on the reservoir expansion was completed. The PFM workshop identified several potential failure modes that required additional investigation, analysis, and evaluation. The innovative design reduces the risks identified in the workshops and integrates cost effective water storage and improved dam safety features for public safety.

Related Studies

Park Creek RJH Geology Memorandum
Park Creek RJH Spillway Erodibility Memorandum
Park Creek EEC Geotechnical Engineering Report
Park Creek EEC Filter Compatibility Report
Park Creek Tessara Water/ Byers Group Design Report
Park Creek Tessara Water / Byers Group Construction Specifications
Park Creek PEN Engineering Structural Design Report
Park Creek Tessara Water / PEN Engineering Construction Plans
Park Creek Schnabel Hydrology Report

Taxpayer Bill of Rights

none