COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Wright-Ingraham Institute	
Name of Water Project	Nexus of Land and Water: Dust on Snow	
Grant Request Amount		**$20,000.00**
Primary Category		$20,000.00
Conservation & Land Use Planning		
Total Applicant Match		**$20,000.00**
Applicant Cash Match		$20,000.00
Applicant In-Kind Match		$0.00
Total Other Sources of Funding		**$80,000.00**
Gale Family Foundation		$20,000.00
National Endowment for the Arts		$20,000.00
Miscellaneous grants		$40,000.00
Total Project Cost		**$120,000.00**

Applicant & Grantee Information

Name of Grantee: Wright-Ingraham Institute
Mailing Address: 633 seventeenth street, suite 2200 Denver CO 80202
FEIN: 840,601,146

Organization Contact: Dylan Gauthier
Position/Title: Managing Director
Email: grants@wright-ingraham.org
Phone: (646) 701-1134

Grant Management Contact: Dylan Gauthier
Position/Title: Managing Director
Email: grants@wright-ingraham.org
Phone: (646) 701-1134

Description of Grantee/Applicant

No description provided

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	37.348900
Longitude	108.585900
Lat Long Flag	Default/Proponent headquarters: If the location cannot be defined with flags above, use location of project proponent headquarters
Water Source	
Basins	Southwest
Counties	Montezuma; Archuleta; San Juan; La Plata; San Miguel
Districts	

Water Project Overview

Major Water Use Type	Environmental
Type of Water Project	Planning
Scheduled Start Date - Design	5/1/2024
Scheduled Start Date - Construction	

Description

The project, “Nexus of Land and Water: Addressing the Issue of Dust on Snow,’’ will take place in Cortez, Colorado with the goal of identifying key problems and associated solutions to the dust on snow issue facing the San Juan Mountains and communities and ecosystems that depend on them. This interdisciplinary project will bring together experts in hydrology, agronomy, soil science, agriculture, range management, education and design fields to develop and prioritize a list of pilot projects to begin to address the dust on snow issue. Currently efforts have focused on the hydrologic impact of dust on snow, which has shown increased snow melt rates, decrease summer water availability, adding additional stress on a water resource system that is already facing impacts from climate change and aridification. This work is the next logical step by turning to the source of dust, by creating a cooperative group of stakeholders and experts to develop solutions that minimize the mobilization of particulate matter in arid environments. Through the creation of pilot projects and eventual implantation of these projects, this group aims to increase seasonal availability of water to downstream users in the watersheds of the San Juan Mountains.

Measurable Results

New Storage Created (acre-feet)
New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
Existing Storage Preserved or Enhanced (acre-feet)
New Storage Created (acre-feet)
Length of Stream Restored or Protected (linear feet)
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
116,798 Number of Coloradans Impacted by Engagement Activity
Other

This work is likely to impact the 2% of the population of Colorado that lives in the Southwest basin, and aims to implement projects that not only impact the Southwest basin, but the entirety of the Rockies, impacting the entire population of Colorado.

Water Project Justification

As the Colorado Water Plan notes, the Southwest basin is projected to have the largest population increase in Colorado, with climate scenarios that could lead to diminished flows, earlier runoff, and decreased baseflow. These issues have been directly exacerbated by an increase in dust on snow events, which decreases the albedo of the snowpack, changing the timing and hydrology of our vital spring runoff. With a strong agricultural and recreation economies in the Southwest basin, and projected increase in municipal demand, this working group seeks to create novel and practical solutions needed to ensure the needs are met for all water users and ecosystem functions. This project supports the first of the basin goals described on page 21 of the 2022 Southwest Basin Implementation plan to “balance all needs and reduce conflict” and will more specifically address strategies A2 and A3 to achieve this goal described on page 22. Our collaborative listening sessions, focus groups and in-person Field Stations workshop are designed to bring a broad coalition of stakeholders, scientists, and problem solvers together for crucial water management discussions and to find solutions to mutually pressing issues in a way that will help to resolve on-going conflicts over our vital water resources. This opportunity for collaboration between scientists, landowners and managers, tribal members and other stakeholders including: will “support dialogue and foster cooperation, collaboration, and conflict resolution among water interests ... for the purpose of implementing strategies to mitigate risk and build resiliency for Southwest Colorado’s and Colorado’s water supply challenges.” This project will also provide an educational component that will help to “create a water-fluent public by providing relevant local and statewide water information.”

Related Studies

https://doi.org/10.1029/2007GL030284

https://doi.org/10.1029/2009JG001077

https://doi.org/10.1002/hyp.10569

https://tc.copernicus.org/articles/12/413/2018/

https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2015JD023287

https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2011JD016482

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N/A