COLORADO
Colorado Water Conservation Board
Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Linda Bassi, Stream and Lake Protection Section

DATE: November 15-16, 2017 Board Meeting

AGENDA ITEM: 30 a-d. Water Plan Grants – Environment and Recreation Final Consideration

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Introduction

The items and grant amounts listed below were presented by staff for Initial Consideration at the September 2017 Board meeting in Walden, Colorado. The Board provided feedback and support for final consideration at this Board meeting. No changes have been made to the recommended level of grant funding.

The Environment and Recreation category started at $1 million in available funds. With the approval of the applications listed below, this Water Plan Grant category will have $545,716 available for future applications.

Staff Recommendation

Staff recommends that the Board approve the projects/activities listed in the following table for Water Plan Grant funding.

Applicant	Project Name	% of Eligible Project Costs	Grant Amount
a. Denver Botanic Gardens	South Platte River Basin Restoration Planning and Feasibility Study	48%	$69,847
b. Trout Unlimited	Needle Rock Ditch Diversion Modification	50%	$20,000
c. Trout Unlimited	Windy Gap Reservoir Bypass Project	12%	$325,237
d. American Whitewater *	Assessing Nonconsumptive Recreational Needs and Opportunities in the Rio Grande Basin	43%	$39,200
		Total	$454,284

* Indicates items that will include a presentation by the applicant

See attached Data Sheets for locations and summaries.

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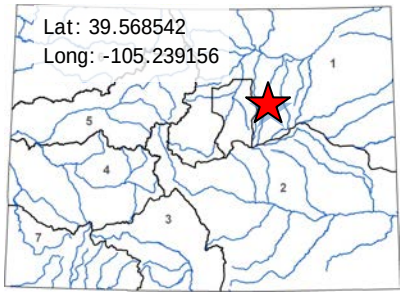
South Platte Basin Restoration Feasibility Study
Denver Botanic Gardens

November 2017 Board Meeting
Final Consideration

Water Plan Grant Application



L O C A T I O N	
County/Counties:	**Jefferson; Larimer; Boulder; Clear Creek; Park; Denver; Adams; Weld**
Drainage Basin:	**South Platte**

D E T A I L S	
Total Project Cost:	$145,485
Water Plan Grant Request:	$69,847
Other CWCB Funding:	$0
Other Funding Amount:	$7,920
Applicant Match:	$67,718
Project Type(s): **Study**	
Project Category(Categories): **Environment & Recreation, Conservation & Land Use Planning**	
Measurable Result: **4,000 ft of stream restored; 20 acres of restored habitat**	

The South Platte River Basin accounts for over half of the state's economic activity, contains seven of the top ten agricultural producing counties in Colorado, and includes many areas for recreation. With increasing populations and water demands, the South Platte Basin Implementation Plan (2015) encourages the protection of watershed health for the environmental and recreational economy. In 2015, Denver Botanic Gardens ("DBG") conducted a watershed improvement project in the lower portion of the South Platte River Basin at Denver Botanic Gardens Chatfield Farms. Partnering with six other organizations and agencies and using a mix of federal, state, county, and private funds, DBG installed three in-stream structures along Deer Creek to re-wet historical oxbows, improving hydrology from historical stream channelization. DBG also planted over 1000 willows, cottonwoods, and other native riparian species and initiated a long-term monitoring program. Monitoring of the project has shown that the installation of in-stream structures can restore historical flows, reactivating historical oxbows and increasing the amount of riparian habitat. Based on the success of this minimally invasive technique, DBG desires to expand this approach to other areas in the South Platte River Basin.

Partnering with Jefferson County Open Space, DBG proposes to identify appropriate locations for in-stream structures on Open Space properties and to incorporate undergraduate and graduate students into all components of the project. The focal habitat for this project is the aquatic habitat in the creek channel, floodplain, cottonwood riparian forest, and associated species. Riparian areas are closely connected with surrounding habitats, acting as thoroughfares between ecosystems such as the mountains and prairies. The proposed work is a vital step to implement restoration efforts on Jefferson County Open Space property.

Jefferson County Open Space strongly supports this application and intends, in coordination with DBG, to use the results of the study to determine budgets, permitting needs, opportunities for public engagement, and construction timelines for project implementation.

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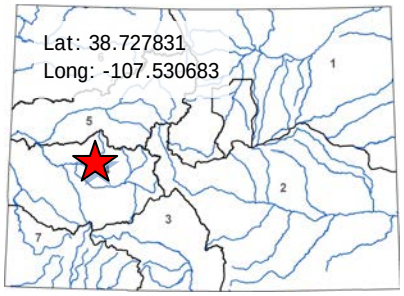
Water Plan Grant Application

Needle Rock Ditch Diversion Modification
Trout Unlimited

November 2017 Board Meeting
Final Consideration



LOCATION	
County/Counties:	**Delta**
Drainage Basin:	**Gunnison**

DETAILS	
Total Project Cost:	$40,000
Water Plan Grant Request:	$20,000
Other CWCB Funding:	$0
Other Funding Amount:	$17,000
Applicant Match:	$3,000
Project Type(s): **Construction**	
Project Category(Categories): **Environment & Recreation**, **Supply & Demand**, **Agriculture**, **Engagement and Innovation**	
Measurable Result: **6 miles restored stream; 100 AF efficiency savings**	

Trout Unlimited (TU) is the nation's largest cold water conservation organization with approximately 150,000 volunteers and roughly 277 employees working to protect, reconnect, restore, and sustain America's fisheries. TU, with assistance from the Needle Rock Ditch Company, Colorado River Water Conservation District, Western Slope Conservation Center, and local stakeholders, proposes to modify the diversion structure of the Needle Rock Ditch diversion to allow fish to pass upstream and to reconnect habitat on Smith Fork Creek. The current diversion is a barrier to all fish during most flow conditions. Additionally, TU and its partners will install a remotely monitored flow measurement gaging station on Smith Fork Creek at the diversion structure.

The Needle Rock Ditch often diverts the majority of streamflow in Smith Fork Creek, leaving little water available for fish habitat below the diversion. Fish that migrate below the diversion during high spring run-off become stranded. The addition of a fish passage structure to the diversion dam will reduce fish loss, bolstering the number of wild fish in Smith Fork Creek, and will improve recreational opportunities on the creek. Real-time stream flow monitoring will help the Crawford Water Conservancy District, other irrigators, and the Division of Water Resources monitor flows in Smith Fork Creek, allowing for improved management of diversions and stored water deliveries to downstream water users. The measuring device also will help water managers track flow conditions and trends in Smith Fork Creek, which has not been gaged since 1994.

Objectives:

1. Reconnect approximately 2 miles of Smith Fork Creek with its upper reaches.
2. Provide passage for rainbow, brown, brook, and cutthroat trout, speckled dace, and mottled sculpin during most flow regimes.
3. Provide streamflow gaging that can be monitored remotely.
4. Improve the populations of sport fish in the Smith Fork drainage for improved recreational angling opportunities.
5. Improve the riparian ecosystem and populations of all fish species in the Smith Fork drainage.
6. Demonstrate the viability of this type of project and its applicability where similar conditions exist in the Gunnison Basin.
7. Continue to build a precedent of cooperation between consumptive and nonconsumptive users that results in improved rivers and streams.

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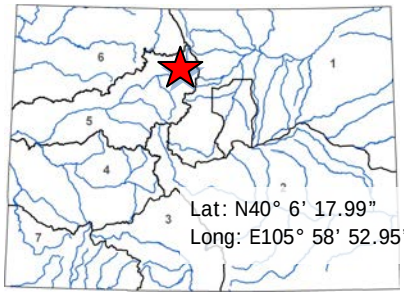
Water Plan Grant Application

Windy Gap Reservoir Bypass Project
Trout Unlimited

November 2017 Board Meeting
Final Consideration



LOCATION	
County/Counties:	**Grand**
Drainage Basin:	**Colorado River**

DETAILS	
Total Project Cost:	$16,139,684
Water Plan Grant Request:	$1,950,000
Other CWCB Funding:	$14,189,684
Other Funding Amount:	
Applicant Match:	
Project Type(s): **Construction & IPP**	
Project Category(Categories): **Environment & Recreation**, **Supply & Demand Gap**, **Conservation & Land Use Planning**	
Measurable Result: 5,280 ft of restored stream	

Trout Unlimited (TU) is a non-profit national conservation organization with more than 150,000 members and over 400 chapters nationwide; its mission is to conserve, protect and restore cold water fisheries and their habitat. In Colorado, TU has developed a number of partnerships to implement cooperative projects and is the fiscal agent for a number of CWCB grants for these projects. TU has a history of involvement with such projects, playing a role in negotiations leading to ground-breaking cooperative agreements and working closely with its partners to improve the conditions of headwater streams.

The Windy Gap Reservoir Bypass Project will re-establish approximately one mile of the Colorado River channel currently inundated by Windy Gap Reservoir, reconnecting the Colorado River and its habitat upstream and downstream of the reservoir. The Project is expected to significantly improve aquatic habitat conditions, which have deteriorated after years of transmountain diversions that supply water to Northern Colorado and the Front Range. Evaluation of the feasibility of the Project was required as part of the CWCB-approved Fish and Wildlife Enhancement Plan for both the Windy Gap Firming Project and the Moffat Collection System Project. The Bypass Project will further the Colorado River Habitat Restoration Project's goal to restore aquatic life downstream of the Reservoir. Sponsored by partners with very diverse interests and a long history of conflict, the Project is the linchpin that connects regional restoration efforts in the headwaters of the Colorado River, and provides a model for watershed cooperation to preserve river health while at the same time serving future municipal water supply needs. CWP grant funds would be used to develop final design and engineering and for construction of the bypass channel.

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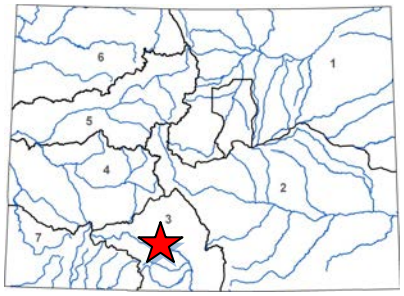
Recreation Needs & Opportunities: Rio Grande Basin American Whitewater

November 2017 Board Meeting
Final Consideration

Water Plan Grant Application



L O C A T I O N
County/Counties: **Conejos; Hinsdale; Mineral; Rio Grande**
Drainage Basin: **Rio Grande**

3 9 2 D E T A I L S	
Total Project Cost:	$90,160
Water Plan Grant Request:	$39,200
Other CWCB Funding:	$0
Other Funding Amount:	$39,200
Applicant Match:	$11,760
Project Type(s): **Study**	
Project Category(Categories): **Environment & Recreation**	
Measurable Result: **3 rivers assessed for recreational boating needs and opportunties**	

**Grant financial numbers differ from application. Numbers updated after discussion with Applicant.*

American Whitewater (AW) is a national non-profit with a mission "to conserve and restore America's whitewater resources and to enhance opportunities to enjoy them safely." AW's Colorado River Stewardship Program represents recreation interests in the development of programs, policies, and cooperative management strategies that protect and enhance river health and recreational needs while balancing the needs of cities and farms. AW has conducted recreational flow studies in Colorado that have informed State and Federal water planning efforts, including the Colorado River Basin Study, State Water Supply Initiative, Non-Consumptive Needs Assessments and several Wild & Scenic River Alternative Management efforts.

AW will coordinate directly with the Rio Grande BRT (RGBRT) to implement existing programs identified in the Nonconsumptive Toolbox that address data gaps related to streamflow needs for recreation. The RGBRT is planning a Boatable Days Study as part of a basin-wide stream management planning effort, and the BRT has invited AW to assist with the Study. This Study will provide an objective, science-based measure of how whitewater recreation opportunities might change (increase or decrease) under future conditions and supply scenarios. AW has completed similar studies in the Colorado, Yampa, and Southwest Basins, and AW is proposing to extend its research efforts to assist the Rio Grande Basin in defining a baseline of recreational non-consumptive flow needs, from which the RGBRT can model the effects of future Projects and processes.

CWP grant and matching funds will be used to support coordination with the RGBRT and local stakeholders, conduct recreational flow preference studies on priority river reaches in the Rio Grande Basin, and complete the Boatable Days Study. This Project will establish a quantitative baseline of current resource conditions supporting recreational opportunities, and aid the RGBRT in determining what, if any, change in recreation opportunities are attributable to IPPs and future hydrological changes. AW proposes that the following 3 streams and rivers be assessed: Conejos River, Rio Grande River, and Treasure Creek.

The project goals include increasing engagement from the Rio Grande Basin community in local water issues and recruiting direct input from the recreational boating community to inform AW's recreational flow evaluation study and needs assessment for the RGBRT. This project will provide direct opportunities for public input and engagement, while providing a platform for collaboration between AW, the RGBRT, local stakeholders, and the general public.