



Last Update: September 18, 2020

Colorado Water Conservation Board
Water Supply Reserve Fund Grant Application

Instructions

All WSRF grant applications shall conform to the current [2020 WSRF Criteria and Guidelines](#).

To receive funding from the WSRF, a proposed water activity must be recommended for approval by a Roundtable(s) **AND** the approved by the Colorado Water Conservation Board (CWCB). The process for roundtable consideration and recommendation is outlined in the 2020 WSRF Criteria and Guidelines. The CWCB meets bimonthly.

If you have questions, please contact the WSRF Grant Program Manager (for all Roundtables) or your Roundtable Liaison:

Ben Wade
ben.wade@state.co.us
 303-866-3441 x3238 (office)

Sam Stein
Sam.stein@state.co.us
 303-866-3441 (office)

WSRF Submittal Checklist (Required)

YES X NO ☐ This request was recommended for CWCB approval by the sponsoring roundtable.

YES X NO ☐ I have read and understand the [2020 WSRF Criteria and Guidelines](#).

YES X NO ☐ Grantee will be able to contract with CWCB using the [Standard Contract](#).¹

Application Documents included:

YES X NO ☐ Exhibit A: Statement of Work² (*Word – see Template*)

YES X NO ☐ Exhibit B: Budget & Schedule² (*Excel Spreadsheet – see Template*)

YES X NO ☐ Letters of Matching and/or Pending 3rd Party Commitments²

YES ☐ NO X ☐ Map²

YES ☐ NO X ☐ Photos/Drawings/Reports

YES X NO ☐ Letters of Support

Contracting Documents³

YES ☐ NO X ☐ Detailed/Itemized Budget³ (*Excel Spreadsheet – see Template*)

YES ☐ NO X ☐ Certificate of Insurance⁴ (*General, Auto, & Workers' Comp.*)

YES ☐ NO X ☐ Certificate of Good Standing⁽⁴⁾

YES ☐ NO X ☐ W-9 Form⁴

YES ☐ NO X ☐ Independent Contractor Form⁴ (*If applicant is individual, not company/organization*)

YES ☐ NO X ☐ Electronic Funds Transfer (ETF) Form⁴

¹Click "Grant Agreements". For reference only/do not fill out or submit/required for contracting

² Required with application if applicable.

³Additional documentation providing a Detailed/Itemized Budget maybe required for contracting. Applicants are encouraged to coordinate with the CWCB Project Manager to determine specifics.

⁴ Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.



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Schedule		
CWCB Meeting	Application Submittal Dates	Type of Request
January	October 1	Basin Account
March	December 1	Basin/Statewide Account/Water Plan Grant Match ¹
May	February 1	Basin Account
July	April 1	Basin Account
September	June 1	Basin/Statewide Account
November	August 1	Basin Account

¹ If either the basin or statewide match includes matching funds from a pending Water Plant Grant, both must be submitted by December 1st deadline for March Board meeting review.

Water Activity Summary		
Name of Applicant	The Water Connection of the Greenway Foundation	
Name of Water Activity	Nautilus 2	
Approving Roundtable(s)	Basin Account Request(s) ¹	
Metro Basin Roundtable	\$25,000 (approved)	
South Platte Basin Roundtable	\$10,000 (approved)	
Statewide Account	\$25,000	
Basin Account Request Subtotal	\$35,000	
Basin Account Request Subtotal Approved by Roundtable	\$0	
Statewide Account Request ⁽¹⁾	\$25,000	
Total WSRF Funds Requested (Basin & Statewide)	\$60,000	
Total Project Costs	\$ 91,900	

¹ Please indicate the amount recommended for approval by the Roundtable(s)

Grantee and Applicant Information	
Name of Grantee(s)	The Water Connection of The Greenway Foundation
Mailing Address	1800 Platte Street



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Grantee and Applicant Information	
FEIN	51- 0193575
Grantee's Organization Contact¹	Devon Buckels
Position/Title	Director, The Water Connection
Email	Devon@thewaterconnection.org
Phone	(720) 837-3289
Grant Management Contact²	Lauren Berent
Position/Title	Associate Director
Email	lauren@greenwayfoundation.org
Phone	(303) 743-9720 ext. 850
Name of Applicant (if different than grantee)	
Mailing Address	
Position/Title	
Email	
Phone	

¹ Person with signatory authority

² Person responsible for creating reimbursement invoices (Invoice for Services) and corresponding with CWCB staff.

Description of Grantee
Provide a brief description of the grantee's organization (100 words or less).
<p>The Greenway Foundation (TGF) advances a sustainable water future, focusing primarily on Colorado and the western United States. TGF protects and revitalizes watersheds, promotes water stewardship, conducts environmental education, stimulates innovative policies and practices while also celebrating the historic, recreational, and environmental roles involving water that flows through our communities. TGF transcends cultural, political, geographic, and disciplinary boundaries, focusing on opportunities and initiatives that bind our communities together, the most vital of which is water. The Water Connection is TGF's water resources arm, fostering civic action and technological innovation for resilient watersheds through a policy, partnerships and economic lens.</p>

Type of Eligible Entity (check one)
<input type="checkbox"/> Public (Government): municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
<input type="checkbox"/> Public (Districts): authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises



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Type of Eligible Entity (check one)	
	Private Incorporated: mutual ditch companies, homeowners associations, corporations
	Private Individuals, Partnerships, and Sole Proprietors: are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
X	Non-governmental organizations: broadly, any organization that is not part of the government
	Covered Entity: as defined in Section 37-60-126 Colorado Revised Statutes

Type of Water Activity (check one)	
	Study
X	Implementation

Category of Water Activity (check all that apply)		
X	Nonconsumptive (Environmental)	
X	Nonconsumptive (Recreational)	
	Agricultural	
	Municipal/Industrial	
	Needs Assessment	
X	Education & Outreach	
	Other	Explain:

Location of Water Activity	
Please provide the general county and coordinates of the proposed activity below in decimal degrees . The Applicant shall also provide, in Exhibit C, a site map if applicable.	
County/Countries	Denver County
Latitude	TBD
Longitude	TBD

Water Activity Overview
<p>Please provide a summary of the proposed water activity (200 words or less). Include a description of the activity and what the WSRF funding will be used for specifically (e.g. studies, permitting, construction). Provide a description of the water supply source to be utilized or the water body affected by the activity. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, area of habitat improvements. If this project addresses multiple purposes or spans multiple basins, please explain.</p> <p>The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, and Schedule.</p>



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Water Activity Overview

TWC seeks funding for the next phase of development of Nautilus, an in-stream trash removal device to be installed and tested in a Metro Denver waterway of the South Platte River within the Chatfield to Sand Creek focus area.

In 2016 TWC tasked local university students to significantly improve water quality and safety by designing an in-stream trash removal device. A half-scale prototype of the winning design, Nautilus has been successfully collecting trash and debris from the Lower Downtown area of Cherry Creek for over 9 months.

The vision for Nautilus 2 is to have proof of concept for a cost effective device that can protect and enhance environmental and recreation attributes by collecting in-stream trash. The goal of developing Nautilus 2 is to improve the environmental health and recreational appeal and safety of Colorado urban waterways.

This project consists of five main tasks: 1) full evaluation by project partners of Nautilus' performance and next generation design priorities; 2) design drawings for next iteration & feasibility/floodplain impact analysis; 3) fabrication of Nautilus 2; 4) permitting and installation; and 5) educational outreach to businesses, educational institutions, media, and the general public.

WSRF funding will be used for tasks 1 through 4.

Measurable Results

To catalog measurable results achieved with WSRF funds please provide any of the following values.

	New Storage Created (acre-feet)	
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive	
	Existing Storage Preserved or Enhanced (acre-feet)	
	Length of Stream Restored or Protected (linear feet)	
	Efficiency Savings (indicate acre-feet/year OR dollars/year)	
	Area of Restored or Preserved Habitat (acres)	
	Length of Pipe/Canal Built or Improved (linear feet)	
X	Other	<ul style="list-style-type: none"> Reduction of flow altering trash Reduction of trash that can cause clogging of culverts, potentially causing flooding Reduction of wildlife ingestion and entanglement due to trash Reduction of trash negatively affecting recreational use of streams and waterways Educating thousands of community citizens through awareness building during school field trips, employee volunteer opportunities and media coverage.

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Measurable Results		
		<ul style="list-style-type: none"> 11,000+ people will learn about innovation in in-stream trash removal through TWC/TGF social media and email newsletters. The entire Metro Denver Region, and potentially the State, will benefit from the development and implementation of an effective trash removal solution.

Water Activity Justification
<p>Provide a description of how this water activity supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the respective roundtable Basin Implementation Plan and Education Action Plan ⁽¹⁾. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers).</p> <p>For applications that include a request for funds from the Statewide Account, the proposed water activity shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan criteria for state support (CWP, Section 9.4, pp. 9-43 to 9-44;) (Also listed pp. 4-5 in 2020 WSRF Criteria and Guidelines).</p>



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Water Activity Justification

The Colorado State Water Plan aims to reduce the gap between water demand and water supply. A key component to achieving this goal will be to protect and enhance the water quality of existing water supplies in the South Platte River Watershed. This must be done given that the population on the Front Range will continue to grow, and that Western Slope Water is reaching full development.

A full scale Nautilus would support the State in developing innovative strategies to protect the water supply from urban trash and its many associated pollutants. A primary goal of the Colorado Water Plan is to address the State's supply and demand challenges while protecting the health of rivers, streams and watersheds. This project supports the State in achieving this goal by facilitating the removal of visible trash pollution. Watershed health affects water supply – the gap will only grow if our available water is ruined with pollutants.

Nautilus addresses key themes in the South Platte / Metro Basin Implementation Plans, including: maximize water resources, protection of watersheds, enhance water quality, and protection of recreational and environmental assets. These BIPs also acknowledge the connection between water supply and water quality.

Supporting Justification:

Colorado State Water Plan, Executive Summary, p.8, S.3.7 Water Quality Issues

A major challenge in the South Platte Basin relates to adequacy of the water quality for domestic and municipal water uses. ... Major technological innovations are needed for delivery, treatment, and disposal of the waste streams from currently available complex water treatment systems, which results in significant cost to customers, impacts to the environment, and uncertain regulatory permitting processes. Relying exclusively on South Platte River supplies in the face of decreasing water quality will be a major challenge in the South Platte Basin."

Colorado State Water Plan, Executive Summary, p.16, Watershed Health, Environment, and Recreation

Colorado's Water Plan sets a measurable objective to cover 80 percent of the locally prioritized lists of rivers with stream management plans, and 80 percent of critical watersheds with watershed protection plans, all by 2030. The environment and recreation are too critical to Colorado's brand not to have robust objectives; a strong Colorado environment is critical to the economy and way of life.

Colorado State Water Plan, p. 3-12

Per SWSI 2010, the South Platte Basin population may nearly double from about 3.5 million people to 6 million people by 2050. Approximately 85 percent of Colorado's population resides in the South Platte Basin, and the Front Range area of the basin is Colorado's economic

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Water Activity Justification

and social engine.

Colorado State Water Plan, p.3-13

A substantial amount of the basin's water supply originates in the Colorado River Basin. As such, compliance with the Colorado River Compact, and efforts to avoid a compact curtailment, are critical to the South Platte Basin.

Colorado State Water Plan, p.3-14

The urban environment is an important component of the quality of life for many South Platte Basin residents. Judgments about the value of the urban environment, including both the need to provide water for irrigated landscape and the vital benefits that landscape provides to citizens and the environment, make the discussions about water supply development needs all the more difficult.

Colorado Water Plan, Analysis and Technical Update, p.142

The South Platte Basin is expected to experience the largest municipal growth in the state by 2050, straining already limited water supplies and increasing competition among municipal, industrial, agricultural, environmental and recreation users in the basin.

South Platte Basin Implementation Plan, p. S-8

Preservation and enhancement of the environmental and recreational aspects of the South Platte River is important to Colorado's economy and quality of life. Additional projects to address these needs should be considered including ... restoration of habitat and stream channels.

South Platte Basin Implementation Plan, p. 5-27

5.5.5 Protect and Enhance Environmental and Recreational Attributes

Environmental and recreational specific projects can be implemented to enhance and protect attributes to contribute to healthier rivers and increase economic benefits from recreational uses. Projects should be proactively pursued to maintain and enhance the recreational and environmental attributes in the South Platte Basin.

South Platte Basin Implementation Plan, p. S-8

A major challenge in the South Platte Basin relates to adequacy of the water quality for domestic and municipal water uses..... Today, however, these higher quality water sources are approaching full development and municipal water suppliers are attempting to meet new supply demands with lower quality water sources often located within the lower portions of the basin.

South Platte Basin Implementation Plan, p. 1-27

1.9.5 Water Quality

Goal: Maintain, enhance and proactively manage water quality for all use classifications.



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¹ Access Basin Implementation Plans or Education Action Plans from Basin drop down menu.

Matching Requirements: Basin Account Requests	
Basin (only) Account grant requests require a 25% match (cash and/or in-kind) from the Applicant or 3 rd party and shall be accompanied by a letter of commitment as described in the 2020 WSRF Criteria and Guidelines (submitted on the contributing entity's letterhead). Attach additional sheet if necessary.	
Contributing Entity	Amount and Form of Match (note cash or in-kind)
Riverfront Park Community Foundation	\$5,000 (committed)
The Greenway Foundation	\$26,900
Total Match	\$31,900
If you requested a Waiver to the Basin Account matching requirements, indicate the percentage you wish waived.	

Matching Requirements: Statewide Account Requests	
Statewide Account grant requests require a 50% match as described in the 2020 WSRF Criteria and Guidelines . At least of 10% of the required Statewide Account Grant request match shall be cash from Basin Account funds whether that is from one or multiple basins; and the remaining 40% of the required match may be provided from any source, including other grants, cash from the Basin Account, or any combination of cash, in-kind services, or in-kind materials.and shall be accompanied by a letter of commitment . Attach additional sheet if necessary.	
Contributing Entity	Amount and Form of Match (note cash or in-kind):
Metro Basin	\$25,000 (cash)
South Platte Basin	\$10,000 (cash)



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Matching Requirements: Statewide Account Requests	
Total Match	\$35,000
If you requested a Waiver to the Statewide Account matching, indicate % you wish waived. (Max 50% reduction of requirement).	

Related Studies
Please provide a list of any related studies, including if the water activity is complimentary to or assists in the implementation of other CWCB programs.
<p>As part of The Greenway Foundation's 2012 inventory of nonpoint trash, volunteers were able to collect over 25,000 pieces of trash in just three days from along the South Platte River. Mile High Flood District also reported that they collect between 600 and 900 cubic yards of trash from the South Platte River each year. Denver Environmental Health's 2011 survey of Confluence Park users found that they perceive trash in Denver's streams and river as a problem and feel that trash removal is a worthwhile effort for the City to conduct. The users surveyed also felt strong enough about the issue that they expressed a desire to volunteer their own time toward activities that would improve the river. The Greenway Foundation partnered with Market Perceptions for a survey of Metro Denver residents which also found that 71% of respondents perceived water pollution as a problem in the area. This disconnect between the concern for water quality and common sources of water pollution is alarming and a likely reason that the issue continues to persist in Denver's waterways. Increasing Metro Denver resident's understanding of sources, behaviors and activities that contribute to these problems is a critical next step.</p> <p>The engineering firm Merrick & Company reviewed the feasibility of installing in-stream trash removal devices in the South Platte River or Cherry Creek. The Merrick engineers concluded that the proposed device, designed to emulate the popular Baltimore Trash Wheel, impacted the South Platte River flood plain to an unacceptable degree. There is not a one-size-fits-all solution to urban waterway trash so innovation and multiple approaches are needed.</p>

Previous CWCB Grants
List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Contract number or purchase order
<p>The following is a list of previous CWCB funding awarded to TGF and/or TWC:</p> <ul style="list-style-type: none">- TGF: South Platte River Recreation and Habitat Feasibility Study; Metro Basin RT and Statewide funds; Approved at 9/17/2008 meeting, Contract # C150442- TGF: South Platte River Recreation and Habitat Improvement Preliminary Design, Metro Basin RT and Statewide funds. Approved at 9/13/2011 meeting, Contract # C150493- TGF: Denver South Platte River Implementation Project, South Platte Basin & Metro RT, approved at 9/28/2012 meeting, Contract # CTGG1 2015-392- TGF: Grant-Frontier Park West Bank Riparian Floodplain Design and Construction Project, Metro Basin RT, approved at 9/24/2013 meeting, Contract # CTGG1 2015-1721

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Previous CWCB Grants
<ul style="list-style-type: none"> - TGF: 8th Ave. to 20th St. In-River Recreation and Environmental Improvements and Floodplain Mitigation, Metro Basin RT and Statewide funds. Approved at 9/12/2014 meeting, Contract # CTGG1 2015 - TWC: Clean River Design Challenge, Approved 7/30/2018, Order Number: POGG1, PDAA, 201900002072 - TWC: Denver One Water Plan. Approved June 29, 2019. Contract #CTGG1 2020-056 - TWC: TAP-IN. Education and Innovation statewide funds. Approved 3/10/2020, Order Number: POGG1, PDAA, 202000002926

Tax Payer Bill of Rights
<p>The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.</p> <p>There are no known TABOR issues that would affect this application.</p>

**Water Supply Reserve Fund
Water Activity Summary Sheet
March 10-11, 2021
Consent Agenda Item 2(h)**

Applicant & Grantee: The Water Connection of the Greenway Foundation

Water Activity Name: Nautilus 2

Water Activity Purpose: Education & Outreach, Nonconsumptive (Environmental and Recreational) - Implementation

County: Denver

Drainage Basin: South Platte

Water Source: Chatfield Dam to Sand Creek

Amount Requested: \$25,000 Metro Basin Account
\$10,000 South Platte Basin Account
\$25,000 Statewide Account
\$60,000 Total Request

Matching Funds: Basin Account Match = \$35,000

- 140% of statewide request (meets 10% min)

Applicant & 3rd Party Match = \$31,900 (cash)

- 127% of the statewide request (meets 10% min)

Total Match (Basin request & Applicant Match) = \$66,900

- 267% of the statewide request (meets 50% min)

Staff Recommendation:
Staff recommends approval of up to \$25,000 from the Metro Basin Account, up to \$10,000 from the South Platte Basin Account and up to \$25,000 from the Statewide Account to help fund the project: Nautilus 2

Water Activity Summary: If approved, the applicant would use WSRF funds to assist in the development of "*Nautilus 2*", an in-stream trash removal device to be installed and tested in a Metro Denver waterway of the South Platte River within the Chatfield to Sand Creek focus area.

In 2016, the applicant tasked local university students to significantly improve water quality and safety by designing an in-stream trash removal device. A half-scale prototype of the winning design, Nautilus has been successfully collecting trash and debris from the Lower Downtown area of Cherry Creek for over 9 months. The applicant's vision for Nautilus 2 is to have proof of concept for a cost effective device that can protect and enhance environmental and recreation attributes by collecting in-stream trash.

The goal of developing Nautilus 2 is to improve the environmental health and recreational appeal and safety of Colorado urban waterways. WSRF funding will be used for tasks 1 through 4. This project consists of five main tasks: 1) full evaluation by project partners of Nautilus' performance and next generation design priorities; 2) design drawings for next iteration & feasibility/floodplain impact analysis; 3) fabrication of Nautilus 2; 4) permitting and installation; and 5) educational outreach to businesses, educational institutions, media, and the general public.

Discussion: This proposal meets the South Platte Basin Implementation Plan's goals of maintaining, enhancing and proactively managing water quality for all use classifications as well as helping address the adequacy of domestic and municipal water uses. The proposal also will further advance Colorado's Water Plan healthy watersheds objectives.

Issues/Additional Needs: No issues or additional needs have been identified.

Eligibility Requirements: The application meets requirements of all eligibility components.

Evaluation Criteria: Staff has determined this activity satisfies the Evaluation Criteria.

Funding Sources/Match	Cash	In-Kind	Total	Status
The Greenway Foundation	\$22,900	\$4,000	\$26,900	Secured
Riverfront Park Community Foundation	\$0	\$5,000	\$5,000	Secured
Sub-Total	\$22,900	\$0	\$31,900	
WSRF Metro Basin Account	\$25,000	\$0	\$25,000	Secured
WSRF South Platte Basin Account	\$10,000	\$0	\$10,000	Secured
WSRF Statewide Account	\$25,000	\$0	\$25,000	
Sub-Total	\$60,000	\$0	\$60,000	
Total Project Costs	\$82,900	\$9,000	\$91,900	

CWCB Project Manager: Ben Wade

November 18, 2020

Ben Wade
Colorado Water Conservation Board
1313 Sherman St., Room 721
Denver, CO 80203

Re: Metro Roundtable support for WSRF Basin Request from The Water Connection/The Greenway Foundation's Nautilus 2

Dear Ben,

At our November 12th meeting, the Metro Roundtable voted to approve a Metro WSRF Basin Grant of \$25,000 for The Water Connection/The Greenway Foundation's Nautilus 2. The Metro Roundtable also approved TWC/TGF's Statewide WSRF request of \$25,000.

Nautilus 1, the result of the 2016 Clean River Design Challenge, is a half-scale prototype was built and for 10 months has been collecting unsightly and unsafe trash and debris from the LoDo area of Cherry Creek. The most common types of trash collected have been thin plastic bags and pieces of Styrofoam—both of which can be ingested by wildlife and/or break down to negatively impact water quality. Also collected were food wrappers, bottles/cans, and textiles that can be dangerous for people and animals using the waterway.

This funding will enable TWC/TGF to with work partners to review the data collected during the pilot of the half-scale prototype, make improvements to the design, and then build and install the full-scale device.

The full scale Nautilus 2 is expected to provide numerous community and environmental benefits:

- Reduce in-stream waste
- Create healthier, more appealing nature spaces and waterways for public enjoyment
- Increase public awareness and understanding of the cause, importance, and impact of trash in streams and natural spaces.

Up on review and consideration of TWC/TGF's proposal, the Metro Roundtable unanimously voted to approve the full \$25,000 of Basin WSRF funds requested by the applicant, and to support the TWC/TGF application for Statewide WSRF in the amount of \$25,000.

Sincerely,



Barbara Biggs, Chair
Metro Roundtable

November 24, 2020

Ben Wade

Colorado Water Conservation Board

1313 Sherman St., Room 721

Denver, CO 80203

Re: Barr Milton Watershed Association Support for WSRF Basin Request from The Water Connection/The Greenway Foundation's Clean River Design Challenge

Dear Ben,

At our November 10th meeting, the South Platte Basin Roundtable unanimously voted to approve a South Platte Basin WSRF Basin Grant of \$10,000 for The Water Connection/The Greenway Foundation's Nautilus 2.

This project focuses on the next phase of development of Nautilus, an in-stream trash removal device to be installed and tested in a Metro Denver waterway of the South Platte River within the Chatfield to Sand Creek focus area. The vision for Nautilus 2 is to have proof of concept for a cost-effective device that can reduce maintenance requirements at downstream diversion structures by collecting in-stream trash. The goal of developing Nautilus 2 is to improve the environmental health and recreational appeal and safety of Colorado urban waterways.

The South Platte Basin Roundtable (SPBRT) lists in its primary objectives the need to solve the water supply gap throughout the basin, and lists the protection of the environment and provision of water-based recreation as crucial to any project that helps solve the water supply gap. Not only does in-stream trash detract from the beauty of riverside parks and waterways, it can be a health and safety hazard for people and aquatic wildlife. Debris can also affect water quality, introducing solvents and other chemicals that can leach into the water. A tremendous amount of time, effort, and expense can be involved in cleaning litter and debris from our waterways. Furthermore, SPBRT's primary objective speaks to education and outreach efforts promoting and supporting SPBRT efforts to solve the water supply gap.

This project addresses both of those objectives by developing a multi-purpose water supply project focused on protecting and enhancing the environment and water-based recreation while promoting education and outreach. Nautilus 2 design priorities include providing an effective and cost-efficient means for removing trash from urban waterways. Trash can contain contaminants that can infiltrate ground water and can collect in streams, rivers, irrigation canals and fields. Working with Mile High Flood District and the City and County of Denver, TWC/TGF will be developing the Nautilus to reduce the impact of in-stream trash including: altering flow, clogging of culverts, reducing flooding potential, increasing wildlife health, and recreational enjoyment and use of urban waterways. By providing onsite signage, media and educational opportunities, TWC/TGF will promote and emphasize SPBRT priorities by encouraging businesses, children and the public to understand the importance of keeping trash out of our waterways. Outreach underscores the impact of trash left behind such as fast-food wrappers, cigarette butts, cans, and other items, and works to raise awareness and change behaviors. Furthermore, thousands of community members will learn about the impact of trash and innovations in

in-stream trash removal. With the further improvement and testing of the Nautilus device, the entire Metro Denver Region and other regions around Colorado can benefit from a cost-effective trash removal solution.

Additional Justification for Nautilus 2:

Colorado State Water Plan, Executive Summary, p.8, S.3.7 Water Quality Issues

A major challenge in the South Platte Basin relates to adequacy of the water quality for domestic and municipal water uses. ... Major technological innovations are needed for delivery, treatment, and disposal of the waste streams from currently available complex water treatment systems, which results in significant cost to customers, impacts to the environment, and uncertain regulatory permitting processes. Relying exclusively on South Platte River supplies in the face of decreasing water quality will be a major challenge in the South Platte Basin."

Colorado State Water Plan, Executive Summary, p.16, Watershed Health, Environment, and Recreation
Colorado's Water Plan sets a measurable objective to cover 80 percent of the locally prioritized lists of rivers with stream management plans, and 80 percent of critical watersheds with watershed protection plans, all by 2030. The environment and recreation are too critical to Colorado's brand not to have robust objectives; a strong Colorado environment is critical to the economy and way of life.

Colorado State Water Plan, p. 3-12 Per SWSI 2010, the South Platte Basin population may nearly double from about 3.5 million people to 6 million people by 2050. Approximately 85 percent of Colorado's population resides in the South Platte Basin, and the Front Range area of the basin is Colorado's economic and social engine.

Colorado State Water Plan, p.3-14 The urban environment is an important component of the quality of life for many South Platte Basin residents. Judgments about the value of the urban environment, including both the need to provide water for irrigated landscape and the vital benefits that landscape provides to citizens and the environment, make the discussions about water supply development needs all the more difficult.

Colorado Water Plan, Analysis and Technical Update, p.142 The South Platte Basin is expected to experience the largest municipal growth in the state by 2050, straining already limited water supplies and increasing competition among municipal, industrial, agricultural, environmental and recreation users in the basin.

Up on review and consideration of TWC/TGF's proposal, the South Platte Basin Roundtable voted to approve the full \$10,000 of Basin WSRF funds requested by the applicant.

Sincerely,



Garrett Varra, Chair
South Platte Basin Roundtable

November 17, 2020

Colorado Water Conservation Board
Water Supply Reserve Fund
1313 Sherman Street
Denver, CO. 80202

Re: WSRF Grant Application
The Water Connection - Applicant
Nautilus 2

Dear Board Members:

In support of the enclosed Water Supply Reserve Fund grant application for the Nautilus 2 project, Mile High Flood District offers our commitment to contribute 38 hours of in-kind time for this project with a value of approximately \$7,600, pending approval of the grant application submitted by The Water Connection. This project stands to benefit our waterways throughout the State of Colorado by developing technology for removing trash from our rivers and creeks.

Mile High Flood District has been a partner in the successful pilot of the Nautilus 1, and we are looking forward to working with The Water Connection to pursue a larger and potentially even more impactful device to keep our waterways clean. We are excited to help provide this educational opportunity to the public, as doing so supports our mission and vision of protecting people, property, and our environment through preservation, mitigation, and education.

Thank you for your consideration of this proposal.

Sincerely,



Ken MacKenzie
Executive Director

MS/mc



November 30, 2020

Colorado Water Conservation Board
1313 Sherman St., Room 721
Denver, CO 80203

Re: Letter of Support, WSRF Funding Request for The Water Connection / The Greenway Foundation's Nautilus 2

Dear Evaluation Team,

The Denver Department of Public Health & Environment (DDPHE) supports the application by The Water Connection / The Greenway Foundation (TWC/TGF) for funding for their Nautilus 2 instream trash removal device.

The Clean River Design Challenge was created by TWC/TGF to come up with creative solutions to problems faced by Denver's urban waterways. The 2016 Challenge, which DDPHE provided funding and technical support for, encouraged teams of students from local colleges to find solutions to remove trash from Cherry Creek and the South Platte River near Confluence Park. The winner was a design called the Nautilus.

A half-scale prototype of the Nautilus was built and for the past 10 months has been collecting trash and debris from Cherry Creek in downtown Denver. The most common types of trash collected are plastic bags and pieces of Styrofoam — both of which can be ingested by wildlife and / or break down to negatively impact water quality. Food wrappers, bottles and cans, textiles, and organic material that can be dangerous for people and animals in the water have also been collected.

WSRF funding will enable TWC/TGF to with work partners to review data collected during the pilot of the half-scale Nautilus prototype, make improvements to the design, and build and install a full-scale device. The full-scale devise is expected to provide numerous community and environmental benefits including:

- Reducing in-stream waste;
- Creating healthier, more appealing natural spaces and waterways for public enjoyment, and;
- Increasing public awareness and understanding of the impact of trash in streams and natural spaces.

DDPHE is a strong supporter of TWC/TGF's efforts to improve Denver's waterways and is excited to see how the next phase of a solution developed by the Clean River Design Challenge will perform.

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Sincerely,

A handwritten signature in blue ink, appearing to read 'Jon Novick', with a stylized, cursive script.

Jon Novick

Water Quality Program Administrator