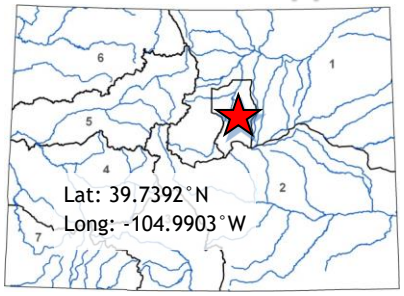
COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Replicable Youth-Driven Innovation Engine to Help Make the South Platte River Swimmable and Fishable

Lincoln Hills Cares

November 2019 Board Meeting

Water Plan Grant Application



LOCATION
County: Denver
Drainage Basin: South Platte

DETAILS	
Total Project Cost:	$204,350
Water Plan Grant Request:	$59,367
Recommended Amount:	$21,964
Other CWCB Funding:	$0
Other Funding Amount:	$189,767
Applicant Match:	$14,583
Project Type(s): Other - Education	
Project Category: Engagement & Innovation	
Measurable Result: 2 miles of stream length restored, 4 acres preserved habitat, 1,000 Coloradoans impacted by engagement activity.	

The applicant, Lincoln Hills Cares, develops young leaders through outdoor education and recreation, cultural history exploration, and workforce advancement. Their programs empower youth who may not otherwise have the opportunity, due to economic, social or family circumstances. Their mission is to provide ongoing environmental education, preservation practices and unique programming.

Lincoln Hills Cares (LHC) in partnership with El Laboratorio and Colorado State University to use funding to support our Environmental Careers and Education Pathways Program for Colorado's Underrepresented Youth.

The proposed program is focused on engaging the residents and stakeholders of the Globeville Elyria Swansea neighborhoods on water education and the protection and restoration of the South Platte River. The program's intent is to bring together teams of underrepresented high school and college youth in a replicable summer program characterized by:

- Citizen science with hands-on project-based learning
- Focus on protecting and restoring rivers for the previously mentioned neighborhoods
- Meaningful engagement and interaction between youth water solution-makers, community, decision-makers, and subject matter experts
- Regained wonder of nature and of Colorado's rivers by underserved youth who often lack access to safe and meaningful outdoor experiences.

If approved, grant funds would help partially fund Tasks 3-5 including citizen science workshops, the implementation of two community wide river restoration events along the South Platte River corridor, and a youth led Colorado State University National Western Center Youth River Festival.

The proposed project would help to meet several goals by developing programs that can help improve the health of the South Platte River, conserving water in an urban community and reaching more Colorado citizens through water education activities.

Funding Recommendation: Staff is recommending a grant of $21,964 from the Engagement and Innovation category of funding conditional upon the applicant securing matching funds. Because of more demand than funds available, the recommended funding is $37,403 less than the requested amount.

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Colorado Water Conservation Board

Water Plan Grant Application

Instructions

To receive funding for a Water Plan Grant, applicant must demonstrate how the project, activity, or process (collectively referred to as "project") funded by the CWCB will help meet the measurable objectives and critical actions in the Water Plan. Grant guidelines are available on the CWCB website.

If you have questions, please contact CWCB at (303) 866-3441 or email the following staff to assist you with applications in the following areas:

Water Storage Projects	Anna.Mauss@state.co.us
Conservation, Land Use Planning	Kevin.Reidy@state.co.us
Engagement & Innovation Activities	Ben.Wade@state.co.us
Agricultural Projects	Alexander.Funk@state.co.us
Environmental & Recreation Projects	Chris.Sturm@state.co.us

FINAL SUBMISSION: Submit all application materials in one email to *waterplan.grants@state.co.us* in the original file formats [Application (word); Statement of Work (word); Budget/Schedule (excel)]. Please do not combine documents. In the subject line, please include the funding category and name of the project.

Water Project Summary

Name of Applicant	Lincoln Hills Cares
Name of Water Project	Replicable Youth-Driven Innovation Engine to Help Make the South Platte River Swimmable and Fishable
CWP Grant Request Amount	$59, 367
Other Funding Sources CSU-TRIO Program	$110,767
Other Funding Sources CSU-National Western Ctr	$5,000 (pending)
Other Funding Sources CSU Colorado Water Institute	$2,000
Other Funding Sources CSU English Department	$6,000
Other Funding Sources Beacon Fund	$27,000 (pending)

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Other Funding Sources EPA Env Justice Grant	$30,000 (secured)
Other Funding Sources Catalyst Fund	$9,000 (secured)
Applicant Funding Contribution	$14,583.35 (in-kind)
Total Project Cost	$204,350.35

Applicant & Grantee Information	
Name of Grantee(s)	Lincoln Hills Cares
Mailing Address	2590 Welton Street #279 Denver, Colorado 80205
FEIN	81-4552726
Organization Contact.	Shane Wright
Position/Title	Fundraising/Program Development
Email	shane@lincolnhillscares.org
Phone	303-815-7613
Grant Management Contact	Shane Wright
Position/Title	Fundraising/Program Development
Email	shane@lincolnhillscares.org
Phone	303-815-7613
Name of Applicant (if different than grantee)	
Mailing Address	
Position/Title	
Email	
Phone	
Description of Grantee/Applicant	
Provide a brief description of the grantee's organization (100 words or less).	

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Lincoln Hills Cares develops the next generation of young leaders through outdoor education and recreation, cultural history exploration, and workforce advancement. Our programs empower youth who may not otherwise have the opportunity, due to economic, social or family circumstances.

We aim to fulfill our mission through ongoing environmental education, preservation practices and unique programming. LHC strives to provide innovative experiences through focused programs and curriculum. Lincoln Hills traces its beginnings to 1922 when it was established as the country's only western resort accessible to African-Americans.

Type of Eligible Entity (check one)	
	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.
	Public (Districts): Authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises.
	Private Incorporated: Mutual ditch companies, homeowners associations, corporations.
	Private Individuals, Partnerships, and Sole Proprietors: Private parties may be eligible for funding.
X	**Non-governmental organizations (NGO):** Organization that is not part of the government and is non-profit in nature.
	Covered Entity: As defined in Section 37-60-126 Colorado Revised Statutes.

Type of Water Project (check all that apply)	
	Study
	Construction
	Identified Projects and Processes (IPP)
X	Other: STE(A)M/Citizen-Science Youth Innovation Engine

Category of Water Project (check the primary category that applies and include relevant tasks)	

	Water Storage - 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.. *Applicable Exhibit A Task(s):*	
	Conservation and Land Use Planning - Activities and projects that implement long-term strategies for conservation, land use, and drought planning. *Applicable Exhibit A Task(s):*	
X	Engagement & Innovation - Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application on the website. *Applicable Exhibit A Task(s):*	
	Agricultural - Projects that provide technical assistance and improve agricultural efficiency. *Applicable Exhibit A Task(s):*	
	Environmental & Recreation - Projects that promote watershed health, environmental health, and recreation. *Applicable Exhibit A Task(s):*	
	Other	Explain:

Location of Water Project	
Please provide the general county and coordinates of the proposed project below in **decimal degrees**. The Applicant shall also provide, in Exhibit C, a site map if applicable.	
County/Counties	City and County of Denver and other cities and counties that are beneficiaries of the waters of the South Platte River Basin
Latitude	
Longitude	

Water Project Overview
Please provide a summary of the proposed water project (200 words or less). Include a description of the project and what the CWP Grant funding will be used for specifically (e.g., studies, permitting process, construction). Provide a description of the water supply source to be utilized or the water body affected by the project, where applicable. 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, and area of habitat improvements, where applicable. If this project addresses multiple purposes or spans multiple basins, please explain. The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, Other Funding Sources/Amounts and Schedule.

Lincoln Hills Cares (LHC) in partnership with El Laboratorio and Colorado State University seek funding to support our Environmental Careers and Education Pathways Program for Colorado's Underrepresented Youth. The program is focused on water education and the protection and restoration of the South Platte River.

Technically, the whole program is an innovation engine that brings together teams of underrepresented high school and college youth in a replicable summer program characterized by:

- Radical integration of culturally sensitive citizen science with hands-on project-based learning
- Focuses on protecting and restoring rivers for the people, and on the "One Water" sustainability paradigm
- Meaningful engagement and interaction between our youth water solution-makers, community, decision-makers, and subject matter experts
- Regained wonder of nature and of Colorado's rivers by underserved youth who often lack access to safe and meaningful outdoor experiences.

By "radical integration of culturally sensitive citizen science" we mean conducting a co-created process that engages the residents and stakeholders of the Globeville Elyria Swansea (GES) neighborhoods in citizen science activities. This would be analogous to a Level 4-Extreme Citizen Science co-created process under Hacklay, 2013. Specifically, our 5 iterative innovation workshops would cover all of the tasks (1-5) under Table 1 below.

Table 1. Co-Created Process to Engage Local Community in Citizen-Science Activities.

Co-Created Workshop Tasks	Level 4 Extreme Citizen Science	Level 3 Participatory Science	Level 2 Distributed Intelligence	Level 1 Crowdsourcing
1. Define of research question/problem	✓	✓		
2. Generate solutions through innovation process	✓	✓		
3. Adopt priority areas for gathering information and river restoration	✓	✓		
4. Disseminate information to local community and regulatory agencies	✓		✓	✓
5. Analyze results and adopt next steps related to further inquiries and actions	✓		✓	

Levels 1-4 from Haklay, Mordechai (Muki). 2013. 'Citizen Science and Volunteered Geographic Information: Overview and Typology of Participation'. In Crowdsourcing Geographic Knowledge:Volunteered Geographic Information (VGI) in Theory and Practice.

Cultural sensitivity in stakeholder engagement

Elyria Swansea has one of the highest Latino populations in any neighborhood in Denver at 84%. Globeville's population is about 68% Latino. The GES neighborhoods possess a strong cultural identity centered on family and community. Residents have identified as top priority having a built environment that supports healthy lifestyles and opportunities of connecting with nature, especially for children and youth. The "culturally sensitive" component of "radical integration of culturally sensitive citizen science" means that we will strive to engage with GES neighborhood residents and stakeholders in culturally sensitive ways (mindful of language and cultural barriers and values).

Students participating in the program will:

- Gain a broader perspective on environmental careers and educational opportunities by working with subject matter experts on real projects
- Have transformative, nature-based experiences solving river and water management problems important to local communities
- Be exposed to a wide and deep professional water network that can connect them to future projects, education, and jobs
- Be better prepared and motivated to apply to colleges and graduate schools because of enriched project-based STEAM coursework
- Gain 21st century learning and career skills—such as teamwork, communications, creativity, and critical thinking—that can motivate them to stay in school and be leaders in their schools, professions, and communities.

Youth-Led Solution-Making Engine for the South Platte River, Colorado
The project will generate from 1-4 citizen science projects and/or water solutions for the riparian habitats and neighborhoods that are part of the Urban South Platte River Corridor ecosystem in Denver, Colorado. The citizen science proposals will be codeveloped with local neighborhood residents and stakeholders. , and will be presented at the annual Colorado State University-National Western Center Youth River Festival in Denver to be held in August of 2020 at Herond Pond/Heller/Carpio-Sanguinette Park. The youth-led River Festival is the capstone project for 20 youth that will be employed and participating in this project.

Viable Fundable Innovative Solutions
Based on the metrics and solutions that our students have already achieved in our Summer 2019 pilot Pathways program with El Laboratorio and Colorado State University, we are confident of producing within 6 months at least 1-2 fundable project proposals generated by our students. Importantly, we assume that some of the fundable student projects will result in real-world benefits that will actually create new jobs and environmental leadership opportunities to help students pay their way through College.

Measurable Results	
To catalog measurable results achieved with the CWP Grant funds, please provide any of the following values as applicable:	
	New Storage Created (acre-feet)
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
	Existing Storage Preserved or Enhanced (acre-feet)
2 miles	Length of Stream Restored or Protected (linear feet)
	Efficiency Savings (indicate acre-feet/year OR dollars/year)
4 acres	Area of Restored or Preserved Habitat (acres)
	Quantity of Water Shared through Alternative Transfer Mechanisms
	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
1,000	Number of Coloradans Impacted by Engagement Activity

100	Other	Community-wide river restoration Volunteers
140		Riparian trees planted
4 acres		Invasive river species removed
2	Other	Iterative 1-day **innovation workshops** with neighborhood leaders, youth, and scientists to identify research questions/issues/goals.
3	Other	Iterative 1-day **innovation workshops** to design & refine innovative research strategies and solutions and provide training for student teachers
1	Other	1-day **post implementation/field work worksho**p to analyze results and determine next phase inquiries and actions

Water Project Justification

Provide a description of how this water project supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the applicable Roundtable Basin Implementation Plan and Education Action Plan. 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).

The proposed water project shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan Framework for State of Colorado Support for a Water Project (CWP, Section 9.4, pp. 9-43 to 9-44;)

Colorado Water Plan (2015)
This proposal advances the following goals of the Colorado Water Plan:

Critical Action Plan (Chapter 10)
Chapter 10 of the Colorado Water Plan describes each of Colorado's water values
And high-impact actions culled from a broader set of actions found throughout
the plan.

Priority Value	Comment:
1. Colorado's Water Plan values a strong environment that includes healthy watersheds, rivers, streams, and wildlife	a. Many of the outputs and outcomes of the project advance a healthy South Platte watershed and River, and healthy wildlife and human neighborhoods along the urban South Platte River corridor
Priority Measurable Objectives	
2. Conservation: Colorado's Water Plan sets a measurable objective to achieve 400,000 acre-feet of municipal and industrial water conservation by 2050.	a. Water education is a foundational component of municipal and industrial water conservation plans in Colorado and the US. Based on the solutions generated by the Summer 2019 Pathways pilot program, we expect many of the solutions generated

	by our students to focus on municipal water conservation education and municipal water conservation policy. b. Assuming the sky is the limit for our students, our project may also generate new high-impact water conserving technologies and strategies for the municipal sector in Colorado.
3. Land Use: Colorado's Water Plan sets a measurable objective that by 2025, 75 percent of Coloradans will live in communities that have incorporated water-saving actions into land-use planning.	a. Based on the priority topics and some of the solutions generated by the Summer 2019 Pathways pilot program, we assume that the issue of equity, clean water/water conservation, and land use development will be front and center in the development of many of the solutions of the innovation engine. b. Some of our solutions can help bring more clarity to important yet generally overlooked strategies to advance equity when water saving actions are incorporated into land use planning.
4. Education, Outreach, and Innovation: Colorado's Water Plan sets a measurable objective to significantly improve the level of public awareness and engagement regarding water issues statewide by 2020, as determined by water awareness surveys. Colorado's Water Plan also sets a measurable objective to engage Coloradans statewide on at least five key. water challenges (identified by CWCB) that should be addressed by 2030	

South Platte Basin Implementation Plan (Metro Basin Roundtable, South Platte Basin Roundtable, 2015)
Conservation Education Programs

This proposal also advances critical projects and methods adopted by the South Platte Basin Implementation Plan:

4.3.1 Conservation Projects and Methods
4.3.1.2 Municipal Conservation Plans in Colorado
4.3.1.2.1 Conservation Plan Components

Water education is considered a foundational pillar of municipal water conservation plans by SWSI, the and well-documented M&I Best Practices. Accordingly, all of the municipal water education solutions that we expect will be generated by our students will advance the municipal water conservation planning components that are priority projects and methods under the South Platte Basin Implementation Plan.

Related Studies

Please provide a list of any related studies, including if the water project is complementary to or assists in the implementation of other CWCB programs.

Previous CWCB Grants, Loans or Other Funding
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; 6) Percentage of other CWCB funding for your overall project.

Taxpayer Bill of Rights
The Taxpayer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect your application.

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Submittal Checklist	
X	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract.
Exhibit A	
X	Statement of Work(1)
X	Budget & Schedule(1)
X	Logic Model/Evaluation and Reporting Metrics
	Engineer's statement of probable cost (projects over $100,000)
X	Letters of Matching and/or Pending 3rd Party Commitments(1)
Exhibit C	
	Map (if applicable)(1)
	Photos/Drawings/Reports
	Letters of Support (Optional)
	Certificate of Insurance (General, Auto, & Workers' Comp.) (2)
	Certificate of Good Standing with Colorado Secretary of State(2)
	W-9(2)
	Independent Contractor Form(2) (If applicant is individual, not company/organization)
Engagement & Innovation Grant Applicants ONLY	
	Engagement & Innovation Supplemental Application(1)

(1) Required with application.
(2) Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.

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ENGAGEMENT & INNOVATION GRANT FUND SUPPLEMENTAL APPLICATION

Introduction & Purpose

Colorado's Water Plan calls for an outreach, education, public engagement, and innovation grant fund in Chapter 9.5.

The overall goal of the Engagement & Innovation Grant Fund is to enhance Colorado's water communication, outreach, education, and public engagement efforts; advance Colorado's water supply planning process; and support a statewide water innovation ecosystem.

The grant fund aims to engage the public to promote well-informed community discourse regarding balanced water solutions statewide. The grant fund aims to support water innovation in Colorado. The grant fund prioritizes measuring and evaluating the success of programs, projects, and initiatives. The grant fund prioritizes efforts designed using research, data, and best practices. The grant fund prioritizes a commitment to collaboration and community engagement. The grant fund will support local and statewide efforts.

The grant fund is divided into two tracks: engagement and innovation. The Engagement Track supports education, outreach, communication, and public participation efforts related to water. The Innovation Track supports efforts that advance the water innovation ecosystem in Colorado.

Application Questions

*The grant fund request is referred to as "project" in this application.

Overview (answer for both tracks)
In a few sentences, what is the overall goal of this project? How does it achieve the stated purpose of this grant fund (above)?
This project serves to address priority municipal water education and water conservation gaps surrounding the urban South Platte River corridor and the neighborhoods and ecosystems that benefit from the South Platte River. Specifically, the project will make the urban South Platte River corridor in the area of the National Western Center a real world citizen science and innovation laboratory for underrepresented youth and 21st Century environmental leaders.
Who is/are the target audience(s)? How will you reach them? How will you involve the community?
We plan to anchor our youth innovation engine in the Globeville, Elyria and Swansea communities which are some of Denver's oldest neighborhoods, settled in the 1880s around metals smelting and railroad yards. The construction of Interstates 70 and 25 in the 1960s severely impacted these neighborhoods, isolating them from each other and from other parts of Denver. Air, noise and odor pollution from the highways, railroads and heavy industry has created physical challenges to residents' everyday health. Other barriers to good health include lack of access to a grocery store for over 10,000 residents and poor quality sidewalks, bike lanes and access to parks and recreation facilities along the South Platte River. Today the neighborhoods are predominantly Latino and Chicano and possess a strong cultural identity centered on family and community. Residents have identified as top priority having a built environment that supports healthy lifestyles and opportunities of connecting with nature, especially for children and youth. The local environmental/public health results of the project will include the following outcomes: ● Young environmental leaders and river stewards become citizen-scientists with a voice in

stormwater management and urban ecosystem planning.
- Underrepresented youth and community members co-create the design and implementation of data gathering activities and strategies to better understand water conservation and improve water quality.
- Citizen science activities have broad based community support and positively affect local residents by improving natural habitat areas of the urban South Platte River identified by residents as priority restoration areas.

Additionally, the local community will be benefitted by the following project outputs:
- 20 youth jobs
- 140 trees
- 4 acres of open space restored
- 4 acres invasive species removal in local watershed
- 2 stream sites sampled and monitored
- 2 miles of riparian restored
- 100 resident volunteering in local habitat restoration and water quality protection activities
- 1,000 local residents educated on healthy rivers and clean environment.

Describe how the project is collaborative or engages a diverse group of stakeholders. Who are the partners in the project? Do you have other funding partners or sources?

The project plan will incorporate to the extent possible the following needs and opportunities identified by local community residents in the official Neighborhood Plans of Globeville, and Elyria and Swansea*:*

Water Quality/Stormwater
- Solve the issue of difficult and non-intuitive entry points to the South Platte River Trail.
- Address drainage and flooding stormwater-related problems in the Globeville-Utah Junction Basin because of lack of adequate infrastructure.
- Exposure to pollution in surface water occurs either by ingestion or through skin contact with the water. The South Platte River often has poor water quality.
- Use existing park areas without affecting existing uses to incorporate water quality treatment features, such as wetlands, to restore wildlife habitat along the river or in Heron Pond.

Habitat Restoration
- Plant trees to beautify their space and to filter harmful particulates from the air.
- Improvements in all parks to make them safer, more accessible and usable.
- Balance open space and park programming needs with water quality opportunities.
- Explore opportunities for green infrastructure within open spaces along South Platte River.
- Encourage ariverside conditions and experiences that further activate and attract visitors to the riverfront and existing parks. These include passive and active recreation experiences, natural and developed edges, public gathering spaces, and destinations to attract regional visitors.

Colorado State University Environmental Careers and Education Pipeline
- Limited employment opportunities.
- There is a unique opportunity related to the National Western Center for Denver Public Schools and Colorado State University to collaborate on a new approach to education. (Elyria Swansea residents)
- Tap collaborative opportunities with Colorado State University through the establishment of educational programs in the area in partnership with the National Western Center. (Globeville residents)

River Festival
- Support existing public festivals bringing community together & look for more opportunities.

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Sources: City of Denver, Globeville Neighborhood Plan, 2016 Update
City of Denver, Elyria Swansea Neighborhood Plan, 2015

Describe how you plan to measure and evaluate the success and impact of the project?

a. Environmental Results-Outputs/Outcomes (Logic Model): See *Logic Model-Lincoln Hills Cares* document submitted as an "Other Attachment"

b. Performance Measurement Plan –A 50% progress report and a final report will be submitted to update the Project Officer. The reporting will evaluate whether the committed activities and outputs (see Logic Model) are met by the project.

The project manager will use the Milestone Schedule and Project Performance Timeline to weekly track and monitor the performance and progress of the project's Tasks 1-6 activities and outputs.

c. Sustainability Plan and Community Vision Project partners will seek input from the project's Community Advisory Committee for the best ways to coordinate planning and implementation of the project and identify future next steps of the initiative in alignment with community planning and visioning processes and relevant community committees and working groups. The project will also seek to advance goals and strategies identified in: City of Denver, Globeville Neighborhood Plan, 2016 Update; City of Denver, Elyria Swansea Neighborhood Plan, 2015. Importantly, the final report will include a Sustainability Plan and Vision for moving the project forward for the next 3 years.

What research, evidence, and data support your project?

City of Denver, Globeville Neighborhood Plan, 2016 Update
City of Denver, Elyria Swansea Neighborhood Plan, 2015
(see relevant sections above)

Describe potential short- and long-term challenges with this project.

The major challenges of our Summer 2019 pilot pathways program has been the timing of the funding received for the Summer project was not able to cover most of the critical project planning work conducted during the months of April and May prior to Summer. Having planning funds available by early 2020 would be ideal for this project.

Please fill out the applicable questions for either the Engagement Track or Innovation Track, unless your project contains elements in both tracks. If a question does not relate to your project, just leave it blank. Please answer each question that relates to your project. Please reference the relevant documents and use chapters and page numbers (Colorado's Water Plan, Basin Implementation Plan, PEPO Education Action Plan, etc.).

Engagement Track

Describe how the project achieves the education, outreach, and public engagement measurable objective set forth in Colorado's Water Plan to "significantly improve the level of public awareness

and engagement regarding water issues statewide by 2020, as determined by water awareness surveys."

The project will implement best in class photo elicitation protocols to measure the increased water awareness resulting from the education activities.

Describe how the project achieves the other measurable objectives and critical goals and actions laid out in Colorado's Water Plan around the supply and demand gap; conservation; land use; agriculture; storage; watershed health, environment, and recreation; funding; and additional.

Chapter 10 of the Colorado Water Plan describes each of Colorado's water values and high-impact actions culled from a broader set of actions found throughout the plan.

Priority Value	Comment:
Colorado's Water Plan values a strong environment that includes healthy watersheds, rivers, streams, and wildlife	a. Many of the outputs and outcomes of the project advance a healthy South Platte watershed and River, and healthy wildlife and human neighborhoods along the urban South Platte River corridor
Priority Measurable Objectives	
Conservation: Colorado's Water Plan sets a measurable objective to achieve 400,000 acre-feet of municipal and industrial water conservation by 2050.	a. Water education is a foundational component of municipal and industrial water conservation plans in Colorado and the US. Based on the solutions generated by the Summer 2019 Pathways pilot program, we expect many of the solutions generated by our students to focus on municipal water conservation education and municipal water conservation policy. b. Assuming the sky is the limit for our students, our project may also generate new high-impact water conserving technologies and strategies for the municipal sector in Colorado.
Land Use: Colorado's Water Plan sets a measurable objective that by 2025, 75 percent of Coloradans will live in communities that have incorporated water-saving actions into land-use planning.	a. Based on the priority topics and some of the solutions generated by the Summer 2019 Pathways pilot program, we assume that the issue of equity, clean water/water conservation, and land use development will be front and center in the development of many of the solutions of the innovation engine. b. Some of our solutions can help bring more clarity to important yet generally overlooked strategies to advance equity when water saving actions are incorporated into land use planning.

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Describe how the project achieves the education, outreach, and public engagement goals set forth in the applicable Basin Implementation Plan(s). South Platte Basin Implementation Plan (Metro Basin Roundtable, South Platte Basin Roundtable, 2015) Conservation Education Programs This proposal advances critical projects and methods adopted by the South Platte Basin Implementation Plan: 4.3.1 Conservation Projects and Methods 4.3.1.2 Municipal Conservation Plans in Colorado 4.3.1.2.1 Conservation Plan Components Water education is considered a foundational pillar of municipal water conservation plans by SWSI, the and well-documented M&I Best Practices. Accordingly, all of the municipal water education solutions that we expect will be generated by our students will advance the municipal water conservation planning components that are priority projects and methods under the South Platte Basin Implementation Plan.
Describe how the project achieves the basin roundtable's PEPO Education Action Plans.
The solutions and leadership development generated by our youth innovation engine for the South Platte River, together with the River Festival that will be the capstone project for the Summer Program, can help advance the following objectives of the **South Platte Basin Roundtable Education Action Plan** (2016-2018): • Recruit new basin roundtable members and committee members to enhance effectiveness, diversity and participation • Create materials and assist Phreatophyte committee in education outreach to Basin Landowners • Develop Partnerships with Colorado State University • Use our Colorado State University-National Western Center Youth River Festival as one of the three annual events to display of roundtable content and BIP/State Water Plan efforts.

Innovation Track
Describe how the project enhances water innovation efforts and supports a water innovation ecosystem in Colorado.
Describe how the project engages/leverages Colorado's innovation community to help solve our state's water challenges.

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Describe how the project helps advance or develop a solution to a water need identified through TAP-IN and other water innovation challenges. What is the problem/need/challenge?
Describe how this project impacts current or emerging trends; technologies; clusters, sectors, or groups in water innovation.

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Colorado Water Conservation Board
Water Plan Grant - Exhibit A

Statement Of Work	
Date:	**August 1, 2019**
Name of Grantee:	**Lincoln Hills Cares**
Name of Water Project:	
Funding Source:	

Water Project Overview: Replicable Youth-Driven Citizen Science Innovation Engine for the South Platte River

Bringing Together the Right Partners
This project will produce and pilot a scalable community-driven participatory approach to stormwater education and urban river restoration through citizen science. Our proposed framework brings together the following participants:

❏ Underrepresented youth leaders and local neighborhood leaders
❏ High school teachers and university instructors and scientists
❏ Key subject matter experts from the fields of citizen-science, stakeholder engagement, and urban South Platte River management
❏ Water utility and agency decision-makers

WHO and HOW
Lincoln Hills Cares will be the Project Manager and the Lead of the 2 on-the-ground citizen science restoration activities (including a community-wide restoration events that will serve as the anchors for the Colorado State University project-based learning programs.

Colorado State University will provide the educational programs, including 4 teachers, 2 student mentors, 1 facilitator, 4 university instructors, and room and board for 5 weeks to 14 underrepresented high school students and 18 first generation incoming university freshmen and women. The education programs will be anchored in the 2 restoration activities and the community-wide restoration event that will be enhanced with the citizen science strategies and lessons designed and co-created with the local GES community leaders and teachers through this grant opportunity.

El Laboratorio will be Lead coordinator and facilitator of the community-driven innovation process that will design and integrate culturally sensitive citizen science strategies with the project-based learning. It will also coordinate the students in the planning and production of the Colorado State University-National Western Center Youth River Festival.

Metro Denver Nature Alliance (Metro DNA) will be Senior Advisor to the innovation process. Its specific role will be to help facilitate with students and local community leaders priority strategies to road test The Denver Metro Water Quality Assessment Tool (WQAT), created by the South Platte Urban Waters Partnership. Decision-makers, researchers and the public can use this online water quality assessment tool to better understand pollution and devise strategies for improving water quality.

Dr. Greg Newman and **CitSci.org**. CitSci.org was developed through the Natural Resources Ecology Lab (NREL) at Colorado State University (CSU) as an initiative to promote citizen involvement in scientific research. To date, CitSci.org's volunteer coordinators have started 747 projects that have contributed a total of 966,924 measurements for analysis to answer local, regional and/or global questions. Dr. Newman is a research scientist, ecologist, and informatics specialist at NREL at CSU. His current research focuses on designing and evaluating the effectiveness of cyber-infrastructure support systems for citizen science programs. Dr Newman and CitSci.org will be Senior Advisors on the design and facilitation of the innovation process on the topic of citizen science, community engagement, and technology deployment.

Senior Teacher Trainer Innovator/Advisor. The innovation process workshops will also include a leading, senior advisor in the area of STEAM, teacher training, and environmental education to help desig teaching modules tailored-made to the citizen science and restoration priorities of the local community leaders and teachers.

How each partner has a vested interest in working with this partnership [other than just getting income from a sub-award or contract]
Lincoln Hills Cares enables life changing moments by creating true Colorado experiences for the extended community, nonprofit partner groups and underserved youth populations in the Denver Metro area and beyond.

Colorado State University, through its Upward Bound, Bridge Scholars, and other programs, seeks to attract and educate underrepresented, first-generation students from low-income families, to inspire them to pursue a college education and fulfilling careers. Its CitSci.org program seeks to promote citizen involvement in scientific research.

El Laboratorio is deeply committed to local communities and environmental justice, bringing people together from different cultures and disciplines to find creative solutions to some of the most intractable environmental challenges facing the Americas.

Project Objectives:

Our project aims to bring together teams of underrepresented high school and college youth from Colorado in a replicable and scale-able environmental youth leadership program characterized by:

- Integration of culturally sensitive citizen-science with hands-on project-based learning
- Focus on rivers and clean environment
- Meaningful engagement and interaction between youth, community, and decision-makers
- Regained wonder of nature by our youth
- Active learning through careful integration of dialogue, education, and application.

Specifically, the project will also have the following Outcomes:

- Young environmental leaders and river stewards become citizen-scientists with a voice in stormwater management and urban ecosystem planning.
- Underrepresented youth and community members co-lead the development and implementation of research and data gathering activities to better understand water pollution and devise strategies that improve water quality.
- Citizen science activities have broad based community support and positively affect local residents by improving natural habitat areas of the urban South Platte River identified by residents as priority restoration areas.
- Replicable and scalable community-driven innovation process for radical integration of culturally sensitive citizen science with project-based learning.

Tasks
Task 1 – Student Recruitment and Stipends
Description of Task:
Lincoln Hills Cares will recruit youth from local high schools with a focus on Bruce Randolph High School in North Denver. Deliverable: a total of 20 youth will be recruited and employed by March 6, 2020 to help facilitate Tasks 3-5 (see below).
Method/Procedure:
Deliverable:

Last Updated: July 2019

Tasks

Tasks
Task 2 - Community Advisory Committee.
Description of Task: Community Advisory Committee is convened by March 27, 2019

Tasks
Task 3 – Innovation Process
Description of Task:
During the Summer of 2020 (June-August): 6 full days of iterative citizen science workshops covering the following outputs and outcomes: • 2 1-day iterative workshops where workshop participants develop and adopt research question/s. • 3 1-day iterative workshops where workshop participants design and refine citizen science priorities and plan. • 1 day workshop where workshop participants analyze results and next questions and steps. • Outcome: a technical memo is produced that articulates the citizen-science priorities and plans adopted by the workshop participants.
Method/Procedure:

Last Updated: July 2019

Tasks
This will be the specific method followed for Task 3: During the Summer of 2020 (June-August): 6 full days of iterative citizen science workshops covering the following outputs and outcomes: • 2 1-day iterative workshops where workshop participants develop and adopt research question/s. • 3 1-day iterative workshops where workshop participants design and refine citizen science priorities and plan. • 1 day workshop where workshop participants analyze results and next questions and steps.
Deliverable:
A technical memo is produced that articulates the citizen-science priorities and plans adopted by the workshop participants.

Tasks
Task 4 – River Restoration
Description of Task:
Students and local neighborhood residents and stakeholders identify, plan and implement two community-wide restoration events along the urban South Platte River Corridor by August 30, 2020. In addition to the citizen science innovation workshops, local communities will be benefited by the following restoration outputs: • 140 trees planted • 4 acres of open space restored • 4 acres of invasive species removal from local watershed • 2 stream sites sampled and monitored • 100 residents volunteering in local habitat restoration and water quality protection activities • 1,000 residents educated on the value of having healthy rivers and a clean environment

Last Updated: July 2019

Tasks
Method/Procedure:
LHCs and El Laboratorio will facilitate 3 iterative 2-hour workshops with a South Platte River Youth Advisory Council that will be convened as part of this project. Youth Council members will work with local leaders, decision-makers and natural resource managers to identify, plan and implement two community-wide restoration events along the urban South Platte River Corridor by August 30, 2020. Youth and local residents will then volunteer and facilitate the two (2) community-wide restoration events with local community volunteers.
Deliverable:
• 140 trees planted • 4 acres of open space restored • 4 acres of invasive species removal from local watershed • 2 stream sites sampled and monitored • 100 residents volunteering in local habitat restoration and water quality protection activities • 1,000 residents educated on the value of having healthy rivers and a clean environment

Tasks
Task 5 – Colorado State University-National Western Center Youth River Festival
Description of Task:

Last Updated: July 2019

Tasks
A youth-led river festival is planned and produced in the Globeville neighborhood by August 31, 2020 where, among other things, local GES community residents, stakeholders, and decision-makers will be invited to help verify and refine the citizen science priorities and projects developed in the innovation process by community residents and others (Task 3).
Method/Procedure:
Task 5 will follow the following method: LHCs in partnership with CSU and El Laboratorio will facilitate the production of a youth-led River festival in the Globeville neighborhood by August 31, 2020 where, among other things, local GES community residents, stakeholders, and decision-makers will be invited to help verify and refine the citizen science priorities and projects developed in the innovation process by community residents and others (Task 3). Two youth innovation fellows from the local community will help co-lead the planning, design, and on-site production of the River Festival.
Deliverable:
The **2d Annual Colorado State University-National Western Center Youth River Festival** occurs in the Globeville neighborhood in August 2020, impacting more than 1,000 people.

Budget and Schedule

This Statement of Work shall be accompanied by a combined Budget and Schedule that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in excel format.

Reporting Requirements

Progress Reports: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of issuance of a purchase order, or the execution of a contract. The progress report shall describe the status of the tasks identified in the statement of work, including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Report: At completion of the project, the applicant shall provide the CWCB a Final Report on the applicant's letterhead that:

- Summarizes the project and how the project was completed.
- Describes any obstacles encountered, and how these obstacles were overcome.
- Confirms that all matching commitments have been fulfilled.
- Includes photographs, summaries of meetings and engineering reports/designs.

The CWCB will pay out the last 10% of the budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

Payment

Payment will be made based on actual expenditures and must include invoices for all work completed. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire Project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.

Costs incurred prior to the effective date of this contract are not reimbursable. The last 10% of the entire grant will be paid out when the final deliverable has been received. All products, data and information developed as a result of this contract must be provided to CWCB in hard copy and electronic format as part of the project documentation.

Performance Measures

Performance measures for this contract shall include the following:
(a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum in-kind contributions (if applicable) per the budget in Exhibit B. Per Water Plan Grant Guidelines, the CWCB will pay out the last 10% of the budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.
(b) Accountability: Per Water Plan Grant Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per Water Plan Grant Guidelines, Progress Reports must be submitted at least once every 6 months. A Final Report must be submitted and approved before final project payment.

Last Updated: July 2019

(c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.
(d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the Grant Agreement.

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan Grant - Exhibit B
Budget and Schedule

Prepared Date: August 23, 2019

Name of Applicant: Lincoln Hills Cares

Name of Water Project: Replicable Youth Driven Innovation Engine for South Platte River

Project Start Date: February 3, 2020

Project End Date: October, 2020

Task No.	Task Description	Task Start Date	Task End Date	Grant Funding Request	Match Funding	Total
1	Student Recruitment and Stipends	2/3/2020	3/6/2020	$11,089	$40,295.69	$51,384.69
2	Community Advisory Committee Convened	2/10/2020	3/7/2020	$3,150	$21,764	$24,914.00
3	Innovation Process: Five Iterative Workshops	3/2/2020	9/12/2020	$27,628	$21,938	$49,566.00
4	Eight Restoration Activities	6/1/2020	8/31/2020	$9,000	$19,219	$28,219.00
5	CSU National Western Center River Festival	8/29/2020	8/29/2020	$8,500	$41,116	$49,616.00
6	Reporting	5/15/2020	9/30/2020	$0	$650	$650.00
			Total	$59,367.00	$144,982.69	$204,350

EL LABORATORIO

To: Ben Wade, CWCB
Date: August 23, 2019

RE: Replicable Youth-Driven Innovation Engine to Help Make the South Platte River Swimmable and Fishable

Dear Ben,

El Laboratorio enthusiastically supports Lincoln Hills Cares's CWCB Grant proposal, *Replicable Youth-Driven Innovation Engine to Help Make the South Platte River Swimmable and Fishable*. We are confident that the funded proposal would result in meaningful, placed-based, authentic citizen science engagement and solution-making with and for the Globeville, Elyria-Swansea (GES) neighborhoods and the urban South Platte corridor.

We are excited and honored with the possibility of partnering with CSU and Lincoln Hills Cares on this important project.

Sincerely,

Jorge Figueroa
Director
El Laboratorio
303-834-0591

ACCESS CENTER
COLORADO STATE UNIVERSITY

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304 Student Services Building
8200 Campus Delivery
Fort Collins, Colorado 80523-8200
P: 9704916473
https://accesscenter.colostate.edu/

Colorado Water Conservation Board
Colorado Department of Natural Resources
1313 Sherman St.
Denver, CO 80203

Re: Water Plan Grant Application: Replicable Youth-Driven Innovation Engine to Help Make the South Platte River Swimmable and Fishable

To Whom It May Concern:

It is a pleasure to partner on the above referenced project and and offer this letter of support.

The Colorado State University Access Center, through the TRIO Upward Bound program, the CSU Bridge Scholars program, and overall access and equity programs, holds within its mission the education and advocacy for underrepresented, first-generation students from low-income families, in pursuit of post-secondary educational opportunities. As a component of this mission, we seek to eduate and inspire them to pursue a college education and fulfilling careers.

The proposed 2020 project offers unparalleled opportunities for our students to engage in very meaningful, real-world projects in support of underserved Denver communities and the South Platte River, and thereby to consider a wider range of college majors and career options. We are particularly enthusiastic about having our students participate in a partnership between scientists and educators in producing citizen science youth as it helps them imagine and pursue new options for their futures.

Thank you in advance for your consideration of this grant application.

Sincerely,

Lucia Delgado

Lucia V. Delgado
Director, College Access
Colorado State University
Http://accesscenter.colostate.edu

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