



Colorado Water Conservation Board

Water Plan

Water Project Summary	
Name of Applicant	Four Corners Office for Resource Efficiency (4CORE)
Name of Water Project	Project-01872 4CORE Laundry to Landscape
Grant Request Amount	\$25,247.00
Primary Category	\$25,247.00
<i>Conservation & Land Use Planning</i>	
Additional Funding Category	\$0.00
<i>Engagement & Innovation Activities</i>	
Total Applicant Match	\$7,750.00
<i>Applicant Cash Match</i>	\$4,750.00
<i>Applicant In-Kind Match</i>	\$3,000.00
Total Other Sources of Funding	\$9,310.00
<i>4CORE</i>	\$1,560.00
<i>La Plata Electric Association Roundup Fund</i>	\$3,250.00
<i>Western Resource Advocates</i>	\$3,000.00
<i>La Plata County</i>	\$1,500.00
Total Project Cost	\$42,307.00

Applicant & Grantee Information

Name of Grantee: Four Corners Office for Resource Efficiency (4CORE)
Mailing Address: 10 Town Plaza #190 Durango CO 81301
FEIN: 262,091,859

Organization Contact: Molly Morris
Position/Title: Program Manager
Phone: (719) 330-4631

Organization Contact - Alternate: Laurie Dickson
Position/Title: Executive Director
Phone: 9702591916

Description of Grantee/Applicant

The Four Corners Office for Resource Efficiency (4CORE) is a 501(c)(3) non-profit with a goal of providing programs and projects that ensure immediate energy, water and cost savings, especially for our lower income residents. We provide beneficial electrification and renewable energy installations, encourage the adoption of clean transportation with electric vehicles and provide water conservation education and best practices, all with the intent of reducing the emissions that produce the harmful effects of a changing climate.

Type of Eligible Entity

- Public (Government)
- Public (District)
- Public (Municipality)
- Ditch Company
- Private Incorporated
- Private Individual, Partnership, or Sole Proprietor
- Non-governmental Organization
- Covered Entity
- Other

Category of Water Project

- Agricultural Projects
Developing communications materials that specifically work with and educate the agricultural community on headwater restoration, identifying the state of the science of this type of work to assist agricultural users among others.
- Conservation & Land Use Planning
Activities and projects that implement long-term strategies for conservation, land use, and drought planning.
- Engagement & Innovation Activities
Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application on the website.
- Watershed Restoration & Recreation
Projects that promote watershed health, environmental health, and recreation.
- Water Storage & Supply
Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging existing reservoirs to restore the reservoirs' full decreed capacity and Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap.

Location of Water Project

Latitude	37.170000
Longitude	107.490000
Lat Long Flag	County centroid: Coordinates based on centroid of county boundary
Water Source	The Pine Basin, Animas Basin and La Plata Basin
Basins	Southwest
Counties	La Plata
Districts	30-Animas River Basin; 33-La Plata River Basin; 31-Los Pinos River Basin

Water Project Overview

Major Water Use Type	Municipal
Subcategory	Education
Scheduled Start Date - Design	3/1/2022
Scheduled Start Date - Construction	
Description	4CORE partners with La Plata County (LPC), San Juan Basin Public Health (SJBPH) and Western Resource Advocates (WRA) to develop an ordinance within the framework of Regulation 86 that legalizes graywater reuse in La Plata County. 4CORE will create a "Laundry to Landscape" (L2L) Design Document and Operations and Maintenance (O&M) Manual, install two pilot L2L systems, develop graywater educational documents and conduct education and outreach in La Plata County.

This grant funding will support the administration, research and development to create the ordinance, as well as collaboration to develop strategies with partnering agencies. Costs and deliverables for the project include the L2L Design Document proposal for County approval, an O&M Manual, installation of two demonstration sites, educational and marketing materials, and community outreach costs. Funding also covers contractor installation fees.

La Plata County is in the Southwest Basin and includes three of the nine subbasins: the Pine Basin, Animas Basin and La Plata Basin, all of which are tributaries to the Colorado River. These basins provide water to growing communities in La Plata County and Southwest Colorado. They support a robust agricultural community, thriving recreational economy and maintain natural ecosystems essential to the tourist economy and down-river users.

Measurable Results

New Storage Created (acre-feet)
New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
Existing Storage Preserved or Enhanced (acre-feet)
New Storage Created (acre-feet)
Length of Stream Restored or Protected (linear feet)
Efficiency Savings (dollars/year)
Efficiency Savings (acre-feet/year)
Area of Restored or Preserved Habitat (acres)
Quantity of Water Shared through Alternative Transfer Mechanisms or water sharing agreement (acre-feet)
56,221 Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
11,244 Number of Coloradans Impacted by Engagement Activity

Water Project Justification

Colorado Water Plan

4CORE's graywater project directly supports five of the eight goals set forth in the Colorado Water Plan (CWP) as listed below. By incorporating efficiency into municipal policy and enabling graywater reuse as a legal efficiency option, this project offers the potential to decrease future municipal demand for treated water. The policy changes that this project will facilitate will promote a stronger water conservation ethic at the policy level and will be a benchmark for policy changes that support efficiency. The education and outreach provided with the grant will inform and engage our communities about Colorado water issues and best practices for conservation and the additional CWP goals to encourage reuse and prepare for climate change are addressed by this being a reuse project and by L2L systems decreasing outdoor demand that is expected to increase as the climate warms.

The five goals 4CORE's proposal addresses are:

- A. Supply-Demand Gap Goal: Meet Colorado's Water Gaps: Use a grassroots approach to formulate projects and methods that avoid some of the undesirable outcomes of the supply-demand gaps.
- B. Conservation Goal: Increase Municipal Conservation and Efficiency: Implement long-term water efficiency strategies to meet local and statewide water needs that are cost-effective and promote a water efficiency ethic throughout Colorado.
- C. Land Use Goal: Integrate Land Use and Water Planning: Initiate the use of local land use tools, where

appropriate, to reduce water demands for municipalities, and the need to urbanize agricultural lands.

H. Education, Outreach, and Innovation Goal:

Advance Education, Outreach, and Innovation: Inform Coloradans about water issues to encourage engagement and innovation in determining Colorado's water future.

I. Additional Critical Goals: Encourage Reuse and Prepare for Climate Change
(CWP-Ch 10)

2019 Analysis and Technical Update to the CWP

The 2019 Analysis & Technical Update to the Colorado Water Plan (CWP Update) builds off five different scenarios laid out in the 2015 Colorado Water Plan: 1) Business as Usual, 2) Weak Economy, 3) Cooperative Growth, 4) Adaptive Growth and 5) Hot Growth. While there aren't new goals included in this update, the improved data and climate projections inform a more complete picture of what we may expect in each of these scenarios. What the 2019 CWP Update makes clear is that municipal demand will increase due to population growth and new climate projections. "Conservation efforts, however, can create significant future benefits in lowering the gap, as demonstrated by comparing the Adaptive Innovation and Hot Growth scenarios (which have similar assumptions on population and climate)" (CWP Update pg. xxii).

More specifically, the recently updated 2022 Southwest Basin Implementation Plan (2022 SWBIP) describes the potential Municipal and Industrial (M&I) demand: "The Southwest Basin currently includes about 2 percent of the statewide population, which is projected to grow between 16 percent and 161 percent between 2015 and 2050. The Southwest Basin is projecting the largest percentage increase in population in the state, which would result in increased municipal and industrial demand in all future scenarios. The highest future projected gap is in the Hot Growth scenario." (2022 SWBIP pg. 49)

4CORE's Laundry to Landscape project moves policy, innovation and best practices in the right direction to close future gaps in all scenarios. Our project supports these projections by planning for the worst while hoping for the best. Additionally, "the residential indoor demand is the greatest demand category in the baseline, but the residential outdoor demand exceeds the residential indoor demand in all of the projections except for Weak Economy. Outdoor demands increased significantly for Hot Growth due to an increase in outdoor demands driven by the "Hot and Dry" climate factor." (CWP Update, Section 4.9 SW Results, pg. 166). As development in La Plata County increases, and climate projections indicate warming temperatures, it becomes more important to implement conservation and efficiency with increased outdoor water demands. 4CORE's proposed Laundry to Landscape pilot projects would model a low-tech, cost-effective system that reduces the demand for treated water for outdoor use.

Southwest Basin Implementation Plan

The 2022 Southwest Basin Implementation Plan includes updates that reflect accomplished projects, new challenges and changing areas of focus since the 2015 SWBIP. One common theme in the updated plan is that water will be an increasingly important consideration in all projected scenarios as the Southwest sees robust and continued growth. "The projected increase in population and climate stress will further increase both the municipal and industrial water demand in the Southwest Basin" (2022 SWBIP pg. 16). The Southwest Basin Roundtable recognizes that a strategic approach is needed to balance water needs between all users: municipalities, industry, agriculture, environment and recreation and has implemented seven goals and corresponding strategies to meet these needs. 4CORE's L2L project supports the following goals as described in both the 2015 and 2022 Basin Implementation Plans:

Goal C: Meet Municipal and Industrial Water Needs

Strategy C3- Promote wise and efficient water use through implementation of municipal conservation and efficiency strategies to reduce overall future water needs. (2022 SWBIP pg.16)

While meeting this goal and strategy specifically, this graywater project would also support the following goal and strategy of the 2022 SWBIP by advancing education and decreasing demand.

Goal A: Balance all Needs and Reduce Conflict

A3: Support and implement education and outreach efforts to the diverse communities of Southwest Colorado to create a water-fluent public by providing relevant local and statewide water information. (2022 SWBIP pg.15)

This project additionally supports the Southwest Basin's Education Action Plan (EAP) by providing education and outreach that encourages long-term behavior changes. The Southwest Basin EAP outlines their support of CWP Goal H to "Advance Education, Awareness and Innovation" by "providing media and digital materials, creating educational materials that can be easily dispersed, and provid(ing) materials as necessary to support the Roundtable." (SW Basin Education Action Plan 2020 pg. 3-4). The education and outreach provided by 4CORE's graywater project will meet each of these EAP goals. Our graywater educational materials will also be shared with the SW Basin Roundtable Public Education, Outreach and Participation (PEPO) liaison, the County, and collaborative partners for distribution.

Related Studies

Related Studies/Workshops:

- 1) The Sonoran Institute and Babbitt Center for Land and Water Policy's Growing Water Smart workshop
- 2) Western Resource Advocates' Integrating Water Efficiency & Land Use Planning guidebook (4CORE participated in this workshop in Durango in 2019)
- 3) CWCB's and Pace University Land Use Law Center's Breaking Down the Silos Webinar Series

Complimentary Projects:

- 1) WRA's Removing Barriers: building capacity to implement critical water conservation and efficiency programs
- 2) City of Golden's L2L Ordinance
- 3) Pitkin County's Graywater Ordinance
- 4) City and County of Denver's Graywater Ordinance

Taxpayer Bill of Rights

As a nonprofit 501(c)3 entity, there would be no issues related to TABOR.

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: (1) Summarizes the project and how the project was completed. (2) Describes any

obstacles encountered, and how these obstacles were overcome. (3) Confirms that all matching commitments have been fulfilled. (4) 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 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 the Budget & Schedule 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. (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.

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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)?
The goal of 4CORE's graywater project is to increase residential water efficiency and conservation in order to decrease demand and provide water utility savings to residents in La Plata County. The graywater ordinance and pilot projects will allow and support a water innovation ecosystem for water reuse. The education and outreach component will enhance the goals of water conservation locally and throughout the state, increase awareness of best practices for conservation, provide additional tools to save water and ensure the safe delivery of graywater from Laundry to Landscape.
Who is/are the target audience(s)? How will you reach them? How will you involve the community?
The target audience this project will reach are La Plata County residents, County officials, builders, plumbers, installers and landscape professionals of La Plata County. The outreach includes a dedicated campaign to reach all of the above in addition to gardeners and members of the community gardens. We will be working with our partnering agencies; La Plata County and San Juan Basin Public Health by providing them with templates for social media posts, website content and videos to share. We will provide outreach and an application for interested residents that may have the home floor plan that allows for a potential L2L demonstration site. Education sessions will be provided for Master Gardeners associated with La Plata County Extension and the Durango Botanic Gardens members for information and outreach regarding the L2L demonstration projects and the water savings potential for gardening in the arid southwest.
4CORE has extensive community reach with over 1500 monthly newsletter subscribers, water conservation enthusiasts who engage through our HomeH2O program and business sponsors. We regularly design social media posts, share with other nonprofit organizations, state organizations and participate in special events where we set up our booth for Earth Day and Farmers Markets. We utilize public service announcements on our radio stations and have the support of our local newspapers. Additionally, we will provide information about the program to

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municipal providers like La Plata Archuleta Water District, Forest Lakes Metropolitan District with over 2,000 residents, as well as water delivery services for outreach and engagement.

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?

4CORE's collaboration reaches across and engages many partners and organizations including a direct partnership from La Plata County Commissioners and County Manager, and San Juan Basin Public Health. We have support from the Southwest Basin Roundtable, Western Resource Advocates, Southwest Water Conservation District and the La Plata County Extension Office. Additionally, neighboring communities (Ouray, Telluride and Ridgeway) are interested in developing an ordinance in their jurisdiction. This project may support their efforts in developing a similar ordinance.

We've received grant funding for this project from the LPEA Round Up Foundation for \$3,250 and In-Kind support from WRA in the amount of \$3,000. We have allocated a portion of our 2022 funding from La Plata County in the amount of \$1,500 towards the research and development of the codes and have contributed \$1560 of 4CORE staff time for preliminary research and meetings with partnering organizations. The total amount of matching funding is \$9,310.

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

4CORE measures, tracks and reports project success and participation for all our programs and projects. For our L2L program we will evaluate the success in the following ways

- Number of participants and attendees site installations and education events
- Number of applicants for site consideration
- Number of applicants for permits with SJBPH
- Water saved from demonstration sites
- Landscape contractors, builders and contractors
- Social media engagement, PSA's, newspaper articles and publicity- "Likes", shares and Google Analytics

What research, evidence, and data support your project?

In the Southwest Basin, residential indoor and outdoor use are the largest portion of use at 33% and 25%, respectively (see Figure 4.9.5 from CWP Update Section 4.9, pg. 166). This is expected to get increase as "municipal demands are projected to grow from approximately 24,000 AFY in 2015 to between 26,000 and 63,000 AFY in 2050. La Plata County accounts for nearly half of the baseline demand, followed by Montezuma County at just under one-third of the basin demand." (CWP Update- Section 4.9, pg. 166). As average demand has increased from 183 gpcd in SWSI 2010 to approximately 198 gpcd in 2019 (CWP Update- Section 4.9, pg. 166), 4CORE considers all water saving efforts to be important to our community's future.

A residential household could make significant impacts to water usage by reusing laundry water in the landscape. According to the 2019 CWP Update, the SW Basin is currently using 66 gpcd, or 57% of residential use indoors and 49 gpcd or 43% outdoors (see Figure 4.9.6 from CWP Update- Section 4.9, pg. 166). Using these numbers and La Plata County's average household size of 2.47, this equals 284.05 gallons per household, above the national average of 241.09 according to Water Research Foundation's 2016 Residential End Uses of Water (pg. 4). With clothes washers accounting for 16% of indoor use (2016 Residential End Uses of Water pg. 5), a household with a L2L system in La Plata County could reuse up to 793 gallons each month and 4,758 gallons over six months of the landscape watering season accounting for 11% of current outdoor demand.

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

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One of the short-term challenges is the potential for a small number of permits and installations as the project gets off the ground. It will involve dedicated marketing for the community to understand that certain graywater use is legal, which homes may be able to install a system, and how to install. As new homes are built in this area, L2L technology may be adopted more easily and become more common. Additionally, other communities have indicated that the permitting process can make implementation more difficult. Our plan is to ensure that permitting as streamlined as possible.

One potential long-term challenge is that Regulation 86 may see changes to facilitate easier implementation in the future. We have met with Bret Icenogle at the Colorado Department of Public Health and Environment (CDPHE) and will draft language that could be inclusive of future changes.

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."
4CORE's graywater project will reach a population of water users who get their water from many different sources. 4CORE has a history of engagement and education across multiple community sectors that includes collaboration with other organizations, businesses, tribal members and governments. We will engage water providers like La Plata Archuleta Water District, Forest Lakes Metropolitan District with over 2,000 residents, the Southern Ute Tribe and water delivery services. All are entities for reaching potential participants in the L2L program. As a third party, nonprofit with this grant funding, we can provide education, resources, contacts and outreach that are unavailable to smaller water suppliers. The education through this program will include Colorado's ongoing water supply issues, the importance of conservation, and the tools and practices that produce savings.
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.
A. Supply-Demand Gap Goal: Meet Colorado's Water Gaps: Use a grassroots approach to formulate projects and methods that avoid some of the undesirable outcomes of the supply-demand gaps. The plan addresses the gap from multiple perspectives (e.g., water storage, reuse, recycling, integrated water management, restoration, and conservation). 4CORE's Graywater Project addresses the goal to increase water efficiency, promote best practices for graywater use and conservation in order to decrease potable water demand in La Plata County. We will accomplish this by: 1) implementing a policy that supports water efficiency through graywater use 2) support innovation and safe installations 3) educate our communities about Colorado water issues, conservation and efficiency.
B. Conservation Goal: Increase Municipal Conservation and Efficiency: Implement long-term water efficiency strategies to meet local and statewide water needs that are cost-effective and promote a water efficiency ethic throughout Colorado. This graywater project will support long-term efficiency goals at a local and state level. While the short-term conservation metrics are hard to quantify, we know that implementing policy that supports water efficiency and conservation is an important step forward. La Plata County will be a leader in the efforts to promote water reuse and conservation for other entities in the state. Our project will put in place an ordinance that will allow for

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positive impacts to the supply-demand gap. It will promote a water efficiency ethic in La Plata County, increase awareness and open the door for future policy change and innovation. The education portion of our project will foster conservation practices, provide cost-savings and help our community understand how simple efforts can positively impact the critical water demands in our drought-stricken region.

C. Land Use

Goal: Integrate Land Use and Water Planning: Initiate the use of local land use tools, where appropriate, to reduce water demands for municipalities, and the need to urbanize agricultural lands.

As La Plata County continues to grow, it is imperative that future land use takes water efficiency and conservation into consideration. By including a graywater ordinance in La Plata County code, we are planning for future development and allowing graywater technology to advance efficiency wherever and whenever applicable. By drafting a graywater ordinance for County adoption, we will be adding La Plata County to the list of Colorado communities that have incorporated water-saving actions into land-use planning. Our efforts to develop and adopt the codes and safe implementation can be used and shared as a model for other counties and municipalities to adopt.

H. Education, Outreach, and Innovation

Goal: Advance Education, Outreach, and Innovation: Inform Coloradans about water issues to encourage engagement and innovation in determining Colorado's water future.

Through the education component of the L2L project, we bring Colorado's water challenges to the attention of our community while informing residents about graywater use and L2L systems. There are many small, rural water providers in La Plata County like La Plata Archuleta Water District. Often these providers don't participate in conservation education, or outreach efforts. Rural water users, and residents with wells, or those that haul water may not know about local, or state water developments. It is essential to educate residents about Colorado's water issues and offer innovative, cost-effective solutions. Utilizing our network of contacts, media outlets, cross marketing with other organizations, and our partners, we can reach thousands of residents. As the organization that is known for our annual group buy for rain barrel purchases for rainwater harvesting, and our HomeH2O program, 4CORE is often the first place the community comes to inquire about water conservation programs and opportunities.

I. Additional Critical Goals and Actions

- Goal: Prepare for Climate Change
- Goal: Encourage Reuse

4CORE has been addressing climate change, resource efficiency and conservation through community programs for over a decade and we understand the urgent need to make changes now to prepare for the effects that climate change will have on our water supply and demand. As the CWP Update makes clear: "Changes in climate primarily influence outdoor aspects of municipal demands, due to impacts on landscape vegetation irrigation water needs (WWA, 2014). These impacts are typically associated with warmer temperatures that increase evapotranspiration ("ET") rates and lengths of growing seasons, which increase the landscape irrigation water demand and consumptive use" (A&T Update V2, Section 1, pg. 17). As the effects of climate change and population growth in La Plata County will cause outdoor municipal demand to increase, 4CORE's graywater project will help offset this demand with reuse. With L2L demonstrations and design and O&M documents, we create a model template and process that our community can follow to implement L2L in their own home. With an ordinance and policy in place to support graywater use, we are assuring that future development in La Plata County has one more tool available to offset the effects that a changing climate has on our water supply.

An additional goal in the 2015 CWP is to encourage reuse. Non-potable reuse, direct potable reuse (DPR) and graywater reuse are all ways to support this goal. While non-potable and DPR are great options for larger communities to consider for the greatest possible impact on future supply, smaller communities and water providers may not have the technology and funding available to make these changes to support reuse at this level. Graywater is a step in the right direction and one that can be taken now to facilitate impactful change into the

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future. 4CORE's graywater project will allow for some graywater use in 2022 in La Plata County. This project informs our communities about why graywater reuse is an important tool to support Colorado's water concerns while encouraging graywater installations through a legal, safe framework (ordinance).

Describe how the project achieves the education, outreach, and public engagement goals set forth in the applicable Basin Implementation Plan(s).

In the 2021 Southwest BIP update, the roundtable has seven goals, and supporting objectives. 4CORE's graywater project directly supports Goals A and C and their initiatives below:

Goal A. Balance all needs and reduce conflict

A3: Support and implement education and outreach efforts to the diverse communities of Southwest Colorado to create a water-fluent public by providing relevant local and statewide water information.
(2022 SWBIP pg. 15)

4CORE's graywater project supports this SW BIP goal by providing education and outreach regarding the new graywater ordinance, L2L systems, safe installation, and how this program supports state and regional water conservation efforts. By offering a solution to help conserve and reuse water, it supports households to reduce their water bills. We can reach diverse audiences through our network with appropriate messaging that focuses on the benefits, long-term cost savings and positive environmental impacts.

Goal C. Meet municipal and industrial water needs

C1: Pursue projects to meet the municipal gap.
C3: Promote wise and efficient water use through implementation of municipal conservation and efficiency strategies to reduce overall future water needs.
(2022 SWBIP pg. 16)

This project provides efficiency strategies that support the Southwest Basin Roundtable goals to meet municipal and industrial water needs especially as the SW Basin is expected to grow. "The Southwest Basin currently includes about 2 percent of the statewide population, which is projected to grow between 16 percent and 161 percent between 2015 and 2050. The Southwest Basin is projecting the largest percentage increase in population in the state, which would result in increased municipal and industrial demand in all future scenarios" (2022 SWBIP, pg. 49). With the population in the SW Basin expected to grow and climate projections increasing outdoor water demand, "wise and efficient" water use will be imperative for the SW Basin. 4CORE's graywater project will legalize and encourage conservation. In the long-term, efficiency projects may help prolong the need to develop new water rights as a way to meet the municipal gap.

Describe how the project achieves the basin roundtable's PEPO Education Action Plans.

This project supports the Southwest Basin's Education Action Plan (EAP) by providing education and outreach that encourages long-term behavior changes. The Southwest Basin EAP outlines their support of the CWP goal to Advance Education, Awareness and Innovation by "providing media and digital materials, creating educational materials that can be easily dispersed, and provid(ing) materials as necessary to support the Roundtable." (2020 SW EAP pg. 3-4). The marketing materials created by 4CORE's graywater project will meet the EAP goals. Our graywater information and educational materials will be shared community-wide, with the SW Roundtable Public Education, Outreach and Participation (PEPO) liaison, La Plata County, outside organizations and collaborative partners for distribution.

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Innovation Track
Describe how the project enhances water innovation efforts and supports a water innovation ecosystem in Colorado.
Legalizing graywater use will provide a path for adoption and create a replicable model for other counties and municipalities. In communities where Regulation 86 has been adopted, there are new applications being developed that were previously not allowed— most notably, Denver Water and Greter Homes Stapleton pilot project and the City of Golden's L2L systems. In order for the technology to advance, businesses must have a legal framework and codes in which to bring their product and services to market. 4CORE's Landscape to Laundry project will allow graywater reuse technology in La Plata County and our development of the codes and permitting will support other communities with information and best practices for developing similar graywater ordinances.
Describe how the project engages/leverages Colorado's innovation community to help solve our state's water challenges.
4CORE is recognized as the organization that develops unique and innovative projects to address regional water shortages through rain water collection projects and conservation education in the region. As a community-based organization focused on conservation and education, we research and recognize relevant trends and issues that arise in the region. We pivot quickly to address challenges and engage other organizations and businesses on projects with the intent of multiplying the impact of our work and coordinating our efforts. We are not limited by the often slow-moving legislative process. Severe, on-going drought, rising population in rural, Southwest Colorado and increased demand on our water supplies demands immediate action. This project engages across all community sectors locally from the County and San Juan Basin Public Health, to the state water and conservation organizations.
Drought and water challenges, although severe in the Southwest, is a state-wide issue. Leveraging similar projects that precede our proposal regarding graywater reuse will inform multiple entities across the state of the possibilities for graywater reuse. Providing ongoing outreach to the supporting organizations during the project and beyond the grant ensures broader community understanding, participation and adoption of important graywater reuse.
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?
While there aren't any TAP-IN projects that are addressing graywater in this way, there is potential for future problem solving, or "Reverse-Pitching" to be done on this issue once more areas become legal "markets" for the product. The legal roadblock to graywater use must be removed before entrepreneurs can really see investment opportunity in solving this problem.
Describe how this project impacts current or emerging trends; technologies; clusters, sectors, or groups in water innovation.
Colorado water agencies see the urgent need to consider all water-saving technologies as drought and a warming planet create water shortages, reduce snow-pack and increase demand as the population grows. While the most savings may be seen with direct potable reuse, L2L systems offer a low-tech, affordable option for existing homes and new development where applicable.
According to the EPA, "Water clusters most commonly fulfill their mission by supporting the development of new businesses, expanding products and services of existing businesses, hosting meetings and conferences, conducting outreach campaigns, providing funding opportunities, and organizing training events for members." As a nonprofit, 4CORE is reaching across businesses, governments and agencies, and we are in effect, forming a cluster by hosting meetings, providing a funding opportunity to advance water conservation and training for the safe, effective L2L installations.



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Among the many innovative technologies that are currently in use are the Colorado River Municipal District's Big Spring facility in Texas that provides water to five communities using direct potable reuse (DPR) processes and Madison Metropolitan Sewerage District recovers phosphorus at their Nine Springs Wastewater Treatment Plant, converting it into fertilizer. There are desalination of brackish water projects, and stormwater recovery programs.

4CORE's L2L graywater reuse is another innovative technology to advance water and cost-savings while supporting the work that is specific to our resource conservation mission. As an organization known as the information hub for efficiency, we intend to continue to be the informal "cluster" and advance water savings in simple applications and new technologies.



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Department of Natural Resources

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Colorado Water Conservation Board

Water Plan Grant – Statement of Work – Exhibit A

Statement Of Work	
Date:	11/29/2021
Name of Grantee:	Four Corners Office for Resource Efficiency (4CORE)
Name of Water Project:	4CORE Laundry to Landscape
Funding Source:	4CORE, LPEA Roundup Foundation, La Plata County, Western Resource Advocates
Water Project Overview:	<p>4CORE has partnered with La Plata County (LPC) and San Juan Basin Public Health (SJBPH) to develop a graywater ordinance within the framework of Regulation 86 that legalizes laundry to landscape graywater reuse in La Plata County. 4CORE will create a “Laundry to Landscape” (L2L) Design Document and Operations and Maintenance (O&M) Manual, install two pilot L2L systems, develop graywater educational documents and conduct education and outreach in La Plata County.</p>
Project Objectives:	<p>Goal: Increase water efficiency and conservation in order to decrease future demand in La Plata County</p> <p>Objectives:</p> <ul style="list-style-type: none">● Promote water efficiency in land use policy with a Laundry to Landscape graywater ordinance● Promote adoption of Laundry to Landscape through innovative demonstration installation sites● Advance public engagement and education about Colorado’s water concerns and graywater use with an education and outreach campaign

Tasks

Task 1 – Ordinance Research, Drafting & Submittal

Description of Task:



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Research the graywater ordinances that have been implemented in other Colorado communities, specifically the City of Golden's Laundry to Landscape ordinance and Pitkin County's graywater ordinance for all categorical uses. We will combine applicable aspects of these ordinances and create a draft ordinance for a Laundry to Landscape graywater ordinance for La Plata County review and adoption.

Method/Procedure:

- 1.a. Gather existing graywater ordinances from Pitkin County and City of Golden
- 1.b. Consult with Pitkin County officials and City of Golden to review ordinances and L2L documents and lessons learned
- 1.c. Create first draft of LPC graywater ordinance based on examples
- 1.d. Coordinate with LPC and SJBH to detail next steps, distribute first draft of codes, and determine permitting and tracking responsibilities
- 1.e. Collaborate with LPC attorney to draft final ordinance
- 1.f. Present to County Commissioners for adoption into LPC code

Deliverable:

Graywater ordinance submitted to LPC County Commissioners

Tasks
Task 2 – Create L2L Design Document and Operations & Maintenance (O&M) Manual
Description of Task:
Research and gather the existing design documents and Operations and Maintenance Manuals that have been created for other Colorado communities and create drafts for our Laundry to Landscape systems in La Plata County. Drafts will be reviewed by La Plata County building code department and San Juan Basin Public Health for adoption and housing on their websites.
Method/Procedure:
<ol style="list-style-type: none">2.a. Draft L2L Design Document based on the City of Golden's existing document2.b. Draft L2L O&M Manual based on the City of Golden's existing document2.c. Present L2L Design Document and O&M Manual to LPC and SJBPH for review and approval
Deliverable:
L2L Design Document and O&M Manual

Last Updated: May 2021

Tasks
Task 3 – Install Two Residential L2L Pilot Projects
Description of Task:
Identify two residential sites for Laundry to Landscape demonstrations. This will be accomplished through community outreach events and marketing pertinent educational information about graywater use in Colorado. We will work with a qualified contractor to install two (2) Laundry to Landscape systems. These installations will serve as demonstration sites and will be the location events to inform public officials, contractors, plumbers and landscapers to observe the installations
Method/Procedure:
<ul style="list-style-type: none"> 3.a. Create marketing and outreach materials that will engage community members to participate in pilot projects 3.b. Advertise L2L Pilot Projects for single-family residential participation 3.c. Site visits to qualify if locations qualify for an L2L installation 3.d. Hire experienced graywater contractor to install two L2L systems 3.e. Invite, County Commissioners, SJPH and plumbing contractors and landscapers to inspect pilot project installations
Deliverable:
Two (2) L2L Pilot Projects

Tasks
Task 4 – Education and Outreach
Description of Task:
4CORE will create education and marketing material for this graywater project. We will produce a video of the installations as a training video available on websites and online. Since many community members will be unfamiliar with the legalities, codes and processes for Laundry to Landscape systems, the education component is essential for the success of safe installation. The materials produced will contain educational copy for La Plata County and San Juan Basin Public Health's websites and other collaborating partners. All the materials will be shared across multiple platforms of social media and 4CORE's newsletter, County advisories and become part of the advertising campaign.
Method/Procedure:

Last Updated: May 2021

- 4.a. Create public marketing and outreach about graywater use and L2L installations
- Produce one training video of L2L pilot project install
 - Create educational material for LPC and SJBH webpages and brochure
 - Create social media posts about graywater ordinance/L2L systems
 - Collect interviews and stories from L2L pilot project participants

Deliverable:

L2L training video, graywater educational marketing materials for websites and brochures, social media posts

Tasks
Task 5 – Administration & Reporting
Description of Task:
4CORE will provide a progress report to CWCB every six months from the date of purchase order and will provide a final report upon completion of the project.
Method/Procedure:
<p>5.a. Provide CWCB a progress report every six months from date of first purchase order</p> <p>5.b. Provide CWCB a final report at completion of the project</p> <p>5.c. Describes challenges and obstacles encountered, and how these obstacles were overcome.</p> <p>5.d. Confirms that all matching commitments have been fulfilled.</p>
Deliverable:
Progress reports and final report

Repeat for Task 3, Task 4, Task 5, etc.

Budget and Schedule

Last Updated: May 2021

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 [redacted] 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 C. Per 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 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 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.
- (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.



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Department of Natural Resources

Last Updated: May 2021

(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 Water Conservation Board

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Colorado Water Conservation Board
Water Plan - County Exhibit B

Water Plan Grant - Exhibit B

Budget and Schedule

Prepared Date: November 10, 2023

Name of Applicant: ACORE(Four Corners Office for Resource Efficiency)

Name of Water Project: Laundry to Landscape Graywater Program

Project Start Date: Spring 2022 (upon award of grant)

Project Start Date: Spring 2021



ACCOUNTABILITY · INTEGRITY · RESPECT

Board of County Commissioners
Marsha Porter-Norton, Chair
Matt Salka, Vice Chair
Clyde Church, Commissioner

1101 East 2nd Ave
Durango, CO 81301
(970)382-6219

October 26, 2021

Colorado Water Conservation Board
1313 Sherman Street Room 718
Denver, CO 80203

Dear Grant Review Committee:

The La Plata County Board of County Commissioners supports 4CORE's grant request for funding to explore the implementation of Regulation 86: Graywater Control Regulations in La Plata County. The ultimate goal of this proposed project will allow La Plata County citizens to obtain permits to utilize water that has already been used in residential washing machines to irrigate outdoors. The grant funding will include assistance in drafting an ordinance for possible use by the county or municipalities to allow the legal reuse of water, coordination with San Juan Basin Public Health for the permitting of greywater systems, and the installation of two educational "Laundry to Landscape" demonstration sites. These sites will provide citizens with a resource to learn about a safe, effective option to save money and conserve water.

Our growing population has resulted in a greater demand on water sources. Efficient water usage and resource management remain a high priority in the habitually dry Four Corners region. 4CORE's graywater project would be an asset to the environment and citizens alike.

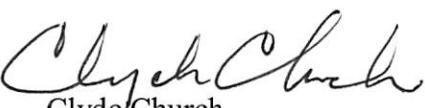
Thank you for your consideration of this grant request.

Sincerely,

LA PLATA COUNTY
BOARD OF COUNTY COMMISSIONERS


Marsha Porter-Norton
Chair


Matt Salka
Vice Chair


Clyde Church
Commissioner



BOARD OF COMMISSIONERS

HILARY COOPER KRIS HOLSTROM LANCE WARING

November 10, 2021

Colorado Water Conservation Board
1313 Sherman Street Room 718
Denver, CO 80203

Dear Review Committee:

San Miguel County is pleased to support 4CORE's application for the Colorado Water Conservation Board's Water Plan Grant in the category of Conservation and Land Use. The project to implement a graywater ordinance in La Plata County and install two educational "Laundry to Landscape" pilot projects will support their County's goals to reduce water waste and prepare for years with low precipitation. San Miguel County has similar issues and similar goals and are very interested in the results of this pilot project.

Water is a limited resource and its proper use is a vital issue affecting all southwest Colorado counties and each one of its citizens. We understand the need to protect and enhance our water resources. 4CORE's graywater project will support their county's 2017 Water Policy Priorities to "encourage water sensitive land use planning" and "support conservation efforts and ecosystem/environmental preservation". In addition to supporting these priorities, this project will educate residents on their water supply and promote a water efficiency ethic in their county.

San Miguel County has looked at adopting greywater regulations as well. Limited research has shown little actual implementation since the Regulation 86 was passed that 'encouraged' greywater use. We support this proposal and 4CORE's technical assistance to establish the legal use of graywater in LaPlata County so we can copy their ultimate successes in San Miguel County.

Sincerely,

A handwritten signature in black ink that reads "Lance Waring".

Lance Waring, Chair
San Miguel County Board of County Commissioners

SAN JUAN BASIN
public health

281 Sawyer Drive, Ste. 300 | Durango, CO 81303

502 South 8th Street | Pagosa Springs, CO 81147

970 247 5702 | sjbpublichealth.org

Colorado Water Conservation Board
1313 Sherman Street Room 718
Denver, CO 80203

To whom it may concern,

San Juan Basin Public Health (SJBPH) is a district public health agency responsible for local environmental health services in La Plata and Archuleta Counties. In this role, we are responsible for implementation of Colorado's on-site wastewater treatment regulation to protect public health and groundwater and surface water quality and responsible recharge of Colorado's water resources. We believe that a responsible graywater control program within our jurisdiction will provide wastewater treatment options for our residents while continuing to safeguard water quality.

As such we are pleased to support 4CORE's application for the Colorado Water Conservation Board's Water Plan Grant in the category of Conservation and Land Use, in order to develop a graywater ordinance in La Plata County that complies with state regulations and to promote responsible use of this resource through demonstration projects. We look forward to the opportunity to assist 4CORE and the County with their development of this program if their application is successful.

Thank you for your thoughtful consideration and for your continued efforts to protect and sustain Colorado's water resources.

Best regards,



Liane Jollon
Executive Director
San Juan Basin Public Health

SOUTHWEST BASINS ROUNDTABLE

C/O La Plata Archuleta Water District
PO Box 1377
Ignacio, Colorado 81137

October 29, 2021

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

Re: Colorado Water Plan Grant

Colorado Water Conservation Board,

The Southwest Basin Roundtable writes this letter to express support for the 4CORE's application for a Water Plan Grant in collaboration with La Plata County and the San Juan Basin Department of Public Health to develop a graywater ordinance. In accordance with CDPHE's regulation 86 an ordinance will be developed to use graywater as a substitute for treated water in applications where it may be appropriate. This may provide a level of water conservation to an already drought strained area.

This project will meet the Southwest Basins Roundtable goal identified in its Basin Implementation Plan, *C3-promote wise and efficient water use through implementation of municipal conservation strategies to reduce overall future water needs.* Any level of conservation will help meet the needs of other users including environmental, recreation, agricultural, and municipal.

Sincerely,



Edward Tolen
Southwest Basins Roundtable Chair



Colorado Water Conservation Board
131 Sherman Street Room 718
Denver, CO 80203

November 2, 2021

Dear Review Committee:

Western Resource Advocates is pleased to submit this letter of support on behalf of 4CORE's Graywater Ordinance and Demonstration Projects application for the Colorado Water Conservation Board's Water Plan Grant in the category of Conservation & Land Use. This project is a collaborative effort of 4CORE, La Plata County, San Juan Basin Health, and Western Resource Advocates and will result in the implementation of a graywater ordinance in La Plata County and two educational "Laundry-to-Landscape" demonstration projects.

Western Resource Advocates (WRA) is committed to providing in-kind technical assistance to 4CORE to develop the graywater ordinance. WRA previously supported the City of Golden to draft, revise, and pass a graywater ordinance and is familiar with all aspects and requirements of Regulation 86. This project is aligned with WRA's objective to support communities to conserve water and reduce wasted water as the cheapest, fastest and most reliable way to secure our water supplies and protect the health of rivers and lakes.

This project is also directly aligned the Colorado Water Plan's conservation and land use planning objectives and it will support the County's goal to reduce water waste and increase drought resiliency in the face of climate change. 4CORE's graywater project will support La Plata County's 2017 Water Policy Priorities to "encourage water sensitive land use planning" and "support conservation efforts and ecosystem/environmental preservation". In addition to supporting these priorities, the project will educate residents on their water supply and promote a water efficiency ethic in the region.

We are confident that the project team has the necessary skills and dedication to successfully and fully execute the proposed graywater project. Thank you for your consideration of this funding request.

Sincerely,

Bart Miller
Healthy Rivers Program Director

Arizona 1429 North First Street Suite 100 Phoenix, AZ 85004	Colorado - Boulder 2260 Baseline Road Suite 200 Boulder, CO 80302	Colorado - Denver 1536 Wynkoop Street Suite 210 Denver, CO 80202	Nevada 550 W. Musser Street Suite G Carson City, NV 89703	New Mexico 343 East Alameda Santa Fe, NM 87501	Utah 307 West 200 South Suite 2000 Salt Lake City, UT 84101
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Colorado Water Conservation Board
1313 Sherman St. Rm 718
Denver CO, 80203
Nov. 30, 2021

Dear Kevin;

Please find our grant application submitted online for the project “4CORE Laundry to Landscape” for La Plata County, Colorado residents.

It is the intent of this project to allow for the adoption of codes and permitting that will ensure safe residential graywater reuse through Laundry to Landscape installations, provide meaningful and relevant education regarding water conservation practices and create a replicable model for other entities in the state to adopt similar codes.

We appreciate this opportunity and look forward to the possibility of working with you and initiating this program in our region.

Sincerely,



Laurie E. Dickson