



Water Plan Grant Application



L O C A T I O N	
County/Countries:	Denver
Drainage Basin:	Metro

D E T A I L S	
Total Project Cost:	\$490,333
Water Plan Grant Request:	\$290,713
Recommended Amount:	\$290,713
Other CWCB Funding:	\$0
Other Funding Amount:	\$0
Applicant Match:	\$199,620
Project Type(s):	Other
Project Category(Categories):	Conservation and Land Use Planning
Measurable Result:	26 af of storage; 9 af efficiency savings; 700,000 Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning & Number of Coloradans Impacted by Engagement Activity

Funding will be used to develop a graywater education and outreach program to help increase the adoption of graywater in Denver. The program will include door-to-door outreach in communities of need, workshops for homeowners and installers, and the establishment of an incentive fund for homeowners and builders / developers. Ultimately, the city will work on changing graywater policy to make it a requirement under the Denver Green Building Code.

Target audiences are existing homeowners (Education about water conservation and graywater reuse and installation of laundry to landscape graywater systems), graywater system installers (Education to ensure understanding of legal requirements and best practices and provide education allowing qualification for City licenses required to install graywater systems), and Home builders and developers of multi-family residential projects, hotels, and dorms (Demonstrate cost / benefit and install graywater systems to meet the requirements of Denver’s green building code).

The Graywater Education and Outreach Program is specifically intended to increase the level of public awareness and engagement of techniques to conserve and reuse water. Materials developed using project funding will be made publicly available on the City and County of Denver’s web page, will be provided to the CWCB for its use, and will be distributed through the Colorado Association of Homebuilders, the Home Builders Association of Metro Denver, the Colorado Green Building Guild, the Colorado Chapter of the US Green Building Council, and other appropriate professional groups and trade organizations.



Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Denver Dept. of Public Health and Environment
Name of Water Project	Project-01870 Graywater Education and Outreach Program
Grant Request Amount	\$290,713.00
Primary Category	\$290,713.00
<i>Conservation & Land Use Planning</i>	
Total Applicant Match	\$199,620.00
<i>Applicant Cash Match</i>	\$86,085.00
<i>Applicant In-Kind Match</i>	\$113,535.00
Total Other Sources of Funding	\$199,620.00
<i>Denver Water</i>	\$50,000.00
<i>Denver Department of Public Health and Environment</i>	\$65,070.00
<i>Denver Department of Public Health and Environment</i>	\$36,085.00
<i>Groundwork Denver</i>	\$8,565.00
<i>Denver Water</i>	\$39,900.00
Total Project Cost	\$689,953.00

Applicant & Grantee Information

Name of Grantee: Denver Dept. of Public Health and Environment	
Mailing Address: 101 West Colfax Avenue, Dept. 800 Denver CO 80202	
FEIN: 6,000,580	
Organization Contact: Jon Novick	
Position/Title: Environmental Program Administrator	Email: jon.novick@denvergov.org
Phone: 7208655468	
Organization Contact - Alternate: Elizabeth Scherer	
Position/Title: Air and Water Program Manager	Email: elizabeth.scherer@denvergov.org
Phone: 720-865-5506	
Grant Management Contact: Jon Novick	
Position/Title: Environmental Program Administrator	Email: jon.novick@denvergov.org
Phone: 7208655468	
Grant Management Contact - Alternate: Norma Alarcon	
Position/Title: Contract Administrator	Email: norma.alarcon@denvergov.org
Phone: 720-865-5424	

Description of Grantee/Applicant

City and County of Denver's Public Health Department.

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	39.739200
Longitude	104.990300
Lat Long Flag	Default/Proponent headquarters: If the location cannot be defined with flags above, use location of project proponent headquarters
Water Source	South Platte River, transbasin diversions from the Williams Fork Reservoir watershed, Roberts Tunnel Collection System, and the Moffat Collection System.
Basins	Metro; South Platte
Counties	Denver
Districts	2-South Platte: Denver Gage to Greeley; 8-South Platte Cheesman to Denver Gage

Water Project Overview

Major Water Use Type	Municipal
Subcategory	
Scheduled Start Date - Design	5/2/2022
Scheduled Start Date - Construction	
Description	

In 2016, Denver became the first municipality in Colorado to allow the installation of graywater systems. Denver developed graywater regulations which closely follow the State of Colorado’s Graywater Control Regulation. In November 2018, Denver enacted a Green Buildings Ordinance which requires developers and owners of certain buildings to select from a menu of strategies for more sustainable development. The menu of sustainable strategies includes graywater. Despite these two programs, in the time since Denver approved the use of graywater systems fewer than twelve permitted systems have been installed. Denver believes the low level of adoption of graywater to be a result of several factors including a lack of knowledge. This proposal seeks to address the lack of knowledge about graywater and is the first phase of implementation of the Denver One Water Plan, a plan funded by a CWCB Water Plan Grant obtained by The Greenway Foundation. This phase of funding will be used to develop an education and outreach program related to graywater reuse. The funding will also be used to train installers and homeowners on graywater reuse and to establish a fund to incentivize the installation of graywater systems in Denver.

Measurable Results

	New Storage Created (acre-feet)
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
26	Existing Storage Preserved or Enhanced (acre-feet)
	New Storage Created (acre-feet)
	Length of Stream Restored or Protected (linear feet)
	Efficiency Savings (dollars/year)
9	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)
700,000	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
700,000	Number of Coloradans Impacted by Engagement Activity

Water Project Justification

Denver’s Graywater Education and Outreach Program will develop materials and resources that can be used anywhere in the State of Colorado. The information and resources developed by the program will be made publicly available on the City and County of Denver’s web page, will be provided to the CWCB for its use, and will be distributed through the Colorado Association of Homebuilders, the Home Builders Association of Metro Denver, the Colorado Green Building Guild, the Colorado Chapter of the US Green Building Council, and other appropriate professional groups and trade organizations.

A primary goal of the Colorado Water Plan is to address the State’s supply and demand challenges.

Relevant Colorado Water Plan Sections are listed below:

Supply - Demand Gap

Colorado’s Water Plan sets a measurable objective of reducing the projected 2050 municipal and industrial gap from as much as 560,000 acre-feet to zero acre-feet by 2030.

The success of Colorado’s Water Plan will ultimately be measured by whether or not the municipal water supply-and-demand gap is closed, and the choices we make to close it. With increased efforts on conservation, storage, land use, alternative transfer methods, and reuse, Colorado can close its gap, balance its water values, and address the effects of climate change on water resources.

- The Graywater Education and Outreach Program supports this goal by increasing awareness of the supply – demand gap and encouraging adoption of a water conservation opportunity identified in the Colorado Water Plan (page 7-32).
- Widespread adoption of graywater will help to improve local water supply reliability and reduce the City's reliance on imported water to mitigate effects of climate change.

Conservation

Colorado's Water Plan sets a measurable objective to achieve 400,000 acre-feet of municipal and industrial water conservation by 2050.

Colorado must address projected gaps between future water needs and available water provisions from both the supply side and the demand side. Every acre-foot of conserved water used to meet new demands is an acre-foot of water that does not need to come from other existing uses.

- The Graywater Education and Outreach Program will advance efforts to supplement scarce water supplies through alternative water sources. Reuse of greywater for irrigation and non-potable uses is a valuable practice for reduction of year-round demand on public water supplies treated to drinking water standards.
- The Graywater Education and Outreach Plan directly supports two of the goals of Section 6.3 (Water Conservation and Reuse) of the Colorado Water Plan. It promotes activities that reduce overall future water needs through cost-effective water efficiency measures and it promotes a water efficiency ethic. When adoption becomes widespread, graywater reuse will become a critical component of reuse strategies intended to address future water needs.
- Graywater reuse is a “no-and-low-regret” strategy that can be used to increase conservation. It is a viable action no matter how the future unfolds, is relatively low cost, and has almost no impact on Colorado's agriculture, environment, or economy.
- Implementation of graywater reuse can help with establishing medium levels of conservation that can help to meet the M&I gap by 2050.
- A Graywater Education and Outreach Program can help meet the South Platte Basin goals and measurable objectives by promoting graywater reuse as one strategy to use water efficiently.
- Promoting graywater reuse through an education and outreach program can encourage high levels of participation in conservation programs.
- Graywater reuse is a tool that can help reduce M&I demands for the South Platte Basin to the levels described in the Colorado Water Plan (page 6-27) and help conserve water as described in the South Platte BIP.
- The Graywater Education and Outreach Program described in this proposal will be shared with other agencies addressing water demand shortfalls and will be designed to be scalable so that it will be effective whether implemented on a small- or a large-scale.

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.

In order to reduce the amount of water needed for future generations of Coloradans and keep urban-adjacent agricultural lands in production, Colorado must support the growth of the next 5 million residents more strategically than the last 5 million. Colorado's Water Plan calls for a partnership among local water providers and Colorado's communities. This partnership aims to incorporate water-saving actions into local land-use planning. The CWCB will work with the Department of Local Affairs, local governments, water providers, Colorado Counties Inc., Colorado Municipal League, the Special District Association, councils of governments, and homebuilders (Colorado Association of Homebuilders) to examine and strengthen the tools they collectively possess to help Colorado reach this objective.

- An Education and Outreach Program promoting graywater reuse can help narrow the water demand / supply gap if graywater reuse is widely adopted. Graywater is a low-cost conservation measure which can save water in both indoor and outdoor setting and can help reduce capital outlays associated with water system upgrades as Colorado's population increases. Incorporation of graywater reuse into land-use planning allows for implementation of a well thought out, effective, sustainable water conservation approach as envisioned in Section 6.3.3 (Land Use) of the Colorado Water Plan (p. 6-83).
- Denver residents already have the option to incorporate water saving actions into their homes using graywater, but adoption levels have been low. Encouraging increased adoption of graywater through education and outreach is one way to raise awareness of water saving techniques among Coloradans.
- The long-term plan to move graywater from an option to a requirement under Denver's Green Building Code will result in new development and qualified redevelopment projects incorporating water saving systems into their plans by integrating water conservation into the City's land use and building codes.
- The Graywater Education and Outreach Program will help to strengthen the partnership between the City and County of Denver, Denver Water, non-profits working in the water conservation arena, home builders and developers, and the green industry and result in the incorporation of water-saving actions into land-use planning. (Chapter 6, Section 6.3.1 (Municipal Water Conservation), p. 6-73)
- The Project furthers the Colorado Water Plan's recognition that "graywater reuse should be an important component of new construction." (Chapter 6, Section 6.3.2. (Reuse), p. 6-75)

Agriculture

Colorado's Water Plan sets an objective that agricultural economic productivity will keep pace with growing state, national, and global needs, even if some acres go out of production.

To achieve this objective, the State will work closely with the agricultural community, in the same collaborative manner that has produced agricultural transfer pilot projects, to share at least 50,000 acre-feet of agricultural water using voluntary alternative transfer methods by 2030. Without a water plan, Colorado could lose up to 700,000 more acres of irrigated agricultural lands—that equals 20 percent of irrigated agricultural lands statewide and nearly 35 percent in Colorado's most productive basin, the South Platte. While the right to buy or sell water rights must not be infringed upon, Colorado's Water Plan describes market-competitive options to typical "buy-and-dry" transactions. Such alternative transfer methods can keep agriculturally dependent communities whole and continue agricultural production in most years, and if such arrangements can be made more permanent in nature, they will provide certainty to both municipal water providers and agricultural producers. Options include lease-fallowing agreements, deficit irrigation, water banking, interruptible supply agreements, rotational fallowing, water conservation programs, and water cooperatives. The State will encourage innovation and creativity by agricultural producers and research institutions to maximize the productivity of every drop of water.

- Graywater reuse in the Denver metropolitan area is a water conservation activity which can play an important role in balancing the need for additional water supply for the urban area.
- Graywater reuse can help reduce the increasing water needs of municipalities and industries that compete with agriculture for water supplies.

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.

Colorado's Water Plan will expand outreach and education efforts that engage the public to promote well-informed community discourse and decision making regarding balanced water solutions. This work will be collaborative and include state, local, and federal partners. As one component of this overall strategy, the CWCB will work with Colorado's innovation community, education and outreach experts, research institutions, and the Governor's Colorado Innovation Network (COIN) to address Colorado's water challenges with innovation and "outside-the-box" creativity. (Colorado Water Plan Executive Summary p. 15)

- The plan directly supports conservation and reuse education.
- The proposed graywater education and outreach program will help to strengthen the partnership between the City and County of Denver, Denver Water, non-profits working in the water conservation arena, home builders and developers, and the green industry.
- The Graywater Education and Outreach Program is specifically intended to increase the level of public awareness and engagement of techniques to conserve and reuse water. The project's partnership with Groundwork Denver will allow the plan to reach most homeowners in Denver (estimated to be more than 700,000 people).
- The Graywater Education and Outreach Program will consist of several communication vehicles, intended to offer opportunities for participation by different target audiences including homeowners, developers and builders, students, installers, and elected officials.

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The Graywater Education and Outreach Program will advance numerous goals of the South Platte Basin Implementation Plan including:

S.5.2 Maintain leadership in conservation and reuse and implement additional measures to reduce water consumption rates by establishing an education and outreach program specifically focused on increasing adoption of graywater, a way to conserve water through reuse.

S.5.3 Maximize use and effectiveness of native South Platte supplies by promoting activities that will reduce the use of South Platte Water for domestic / potable supplies.

S.5.5 Protect and enhance environmental and recreation attributes by maximizing opportunities which allow water to remain in waterways to support habitat.

S.5.8 Manage the risk of increased demands and reduced supplies due to climate change by promoting adoption of activities that maximize the use of every drop of water.

S.5.9 Facilitate effective South Platte communications and outreach programs that complement the state's overall program through a robust public engagement process intended to improve public understanding of the potential for conservation available from indoor graywater use.

1.9.8 Meet Community Water Needs throughout Colorado by: 1) Using water efficiently with high levels of participation in conservation programs... by creating an education and outreach and an incentive program focused in increasing water use efficiency through reuse and to increase the level of participation in conservation programs including graywater reuse.

4.3.1.7 Conservation Summary the education and outreach program will enhance statewide education that will support higher levels of indoor conservation and will provide a model that is replicable and scalable for future water savings in communities throughout Colorado.

Related Studies

Denver One Water Plan (2021) – the graywater education and outreach program described in this application is one of the first steps the City of Denver is taking to implement the Denver One Water Plan. Development of the One Water Plan was funded by a CWCB grant to The Greenway Foundation in 2018.

Water Efficiency Plan (2017) – Denver Water

Colorado Water Plan (2015) (assists in implementation)

City and County of Denver Climate Adaptation Plan (2014) – Department of Environmental Health (assists in implementation)

Metro Vision 2035 (2011) – DRCOG

Taxpayer Bill of Rights

There are no known TABOR issues that would affect this application.

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.



Last Updated: May 2021

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 & Supply Projects	Matthew.Stearns@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
Water Sharing & ATM 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	Denver Department of Public Health and Environment / Environmental Quality Division	
Name of Water Project	Graywater Education and Outreach Program	
CWP Grant Request Amount		\$290,713
Other Funding Sources	Groundwork Denver	\$8,569
Other Funding Sources	Denver Water	\$89,900
Other Funding Sources		\$
Applicant Funding Contribution		\$101,151
Total Project Cost		\$490,333



Last Updated: May 2021

Applicant & Grantee Information	
Name of Grantee(s)	Denver Department of Public Health and Environment / Environmental Quality Division
Mailing Address	201 W. Colfax, Dept. 800, Denver, CO 80202
FEIN	84-6000580
Organization Contact	Jon Novick
Position/Title	Environmental Programs Administrator, Water Quality
Email	jon.novick@denvergov.org
Phone	720-865-5468
Grant Management Contact	Jon Novick
Position/Title	Environmental Programs Administrator, Water Quality
Email	jon.novick@denvergov.org
Phone	720-865-5468
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).	
<p>The Denver Department of Public Health and Environment is Denver's nationally accredited public health agency. We empower Denver's communities to live better, longer by providing people with opportunities that support their well-being and by improving services that enrich our community.</p> <p>The Environmental Quality Division creates and sustains a healthy environment through science, service, and policy. EQ protects the environment by conducting scientific assessments, regulatory compliance, technical assistance and training, and environmental education for both private sector and city operations. EQ advocates for federal, state, and local environmental policies that protect the environment and public health.</p>	



Last Updated: May 2021

Type of Eligible Entity (check one)	
X	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.
	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)	
X	Study
	Construction
X	Other – Education and Outreach Program

Category of Water Project (check the primary category that applies and include relevant tasks)			
	<p>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, multi-beneficial projects, water sharing agreements, Alternative Transfer Methods, and those projects identified in basin implementation plans to address the water supply and demand gap. <i>Applicable Exhibit A Task(s):</i></p> <p>Note: For Water Sharing Agreements or ATM Projects - please include the supplemental application available on the CWCB's website.</p>		
X	<p>Conservation and Land Use Planning - Activities and projects that implement long-term strategies for conservation, land use, water efficiency, and drought planning. <i>Applicable Exhibit A Task(s):</i></p>		
	<p>Engagement & Innovation - Activities and projects that support water education, outreach, and innovation efforts. <i>Applicable Exhibit A Task(s):</i></p>		
	<p>Agricultural - Projects that provide technical assistance and improve agricultural efficiency. <i>Applicable Exhibit A Task(s):</i></p>		
	<p>Environmental & Recreation - Projects that promote watershed health, environmental health, and recreation. <i>Applicable Exhibit A Task(s):</i></p>		
	<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Other</td> <td>Explain:</td> </tr> </table>	Other	Explain:
Other	Explain:		



Last Updated: May 2021

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/Countries	City and County of Denver
Latitude	39.7392°N
Longitude	104.9903°W

Water Project Overview
<p>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.</p> <p>The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, Other Funding Sources/Amounts and Schedule.</p>
<p>In 2016, Denver became the first municipality in Colorado to allow the installation of graywater systems. Denver developed graywater regulations which closely follow the State of Colorado's Graywater Control Regulation. In November 2018, Denver enacted a Green Buildings Ordinance which requires developers and owners of certain buildings to select from a menu of strategies for more sustainable development. The menu of sustainable strategies includes graywater. Despite these two programs, in the time since Denver approved the use of graywater systems fewer than twelve permitted systems have been installed. Denver believes the low level of adoption of graywater to be a result of several factors including a lack of knowledge. This proposal seeks to address the lack of knowledge about graywater and is the first phase of implementation of the Denver One Water Plan, a plan funded by a CWCB Water Plan Grant obtained by The Greenway Foundation. This phase of funding will be used to develop an education and outreach program related to graywater reuse. The funding will also be used to train installers and homeowners on graywater reuse and to establish a fund to incentivize the installation of graywater systems in Denver.</p>



Last Updated: May 2021

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)
28-36 acre-feet	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
	Existing Storage Preserved or Enhanced (acre-feet)
	Length of Stream Restored or Protected (linear feet)
9-12 acre-feet / year	Efficiency Savings (indicate acre-feet/year OR dollars/year)
	Area of Restored or Preserved Habitat (acres)
	Quantity of Water Shared through Alternative Transfer Mechanisms or water sharing agreement
700,000	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
700,000	Number of Coloradans Impacted by Engagement Activity
X	Other Explain: Exact metrics and measures are difficult to determine at this stage, however they will be monitored as part of the evaluation of the project.

Water Project Justification
<p>Provide a description of how this water project supports the goals of Colorado's Water Plan, the Analysis and Technical Update to the Water Plan, 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).</p> <p>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;)</p> <p>Denver's Graywater Education and Outreach Program will develop materials and resources that can be used anywhere in the State of Colorado. The information and resources developed by the program will be made publicly available on the City and County of Denver's web page, will be provided to the CWCB for its use, and will be distributed through the Colorado Association of Homebuilders, the Home Builders Association of Metro Denver, the Colorado Green Building Guild, the Colorado Chapter of the US Green Building Council, and other appropriate professional groups and trade organizations.</p> <p>A primary goal of the Colorado Water Plan is to address the State's supply and demand challenges.</p> <p>Relevant Colorado Water Plan Sections are listed below:</p> <p>Supply - Demand Gap <i>Colorado's Water Plan sets a measurable objective of reducing the projected 2050 municipal and industrial gap from as much as 560,000 acre-feet to zero acre-feet by 2030.</i></p> <p>The success of Colorado's Water Plan will ultimately be measured by whether or not the municipal water supply-and-demand gap is closed, and the choices we make to close it. With increased</p>



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efforts on conservation, storage, land use, alternative transfer methods, and reuse, Colorado can close its gap, balance its water values, and address the effects of climate change on water resources.

- The Graywater Education and Outreach Program supports this goal by increasing awareness of the supply – demand gap and encouraging adoption of a water conservation opportunity identified in the Colorado Water Plan (page 7-32).
- Widespread adoption of graywater will help to improve local water supply reliability and reduce the City’s reliance on imported water to mitigate effects of climate change.

Conservation

Colorado’s Water Plan sets a measurable objective to achieve 400,000 acre-feet of municipal and industrial water conservation by 2050.

Colorado must address projected gaps between future water needs and available water provisions from both the supply side and the demand side. Every acre-foot of conserved water used to meet new demands is an acre-foot of water that does not need to come from other existing uses.

- The Graywater Education and Outreach Program will advance efforts to supplement scarce water supplies through alternative water sources. Reuse of greywater for irrigation and non-potable uses is a valuable practice for reduction of year-round demand on public water supplies treated to drinking water standards.
- The Graywater Education and Outreach Plan directly supports two of the goals of Section 6.3 (Water Conservation and Reuse) of the Colorado Water Plan. It promotes activities that reduce overall future water needs through cost-effective water efficiency measures and it promotes a water efficiency ethic. When adoption becomes widespread, graywater reuse will become a critical component of reuse strategies intended to address future water needs.
- Graywater reuse is a “no-and-low-regret” strategy that can be used to increase conservation. It is a viable action no matter how the future unfolds, is relatively low cost, and has almost no impact on Colorado’s agriculture, environment, or economy.
- Implementation of graywater reuse can help with establishing medium levels of conservation that can help to meet the M&I gap by 2050.
- A Graywater Education and Outreach Program can help meet the South Platte Basin goals and measurable objectives by promoting graywater reuse as one strategy to use water efficiently.
- Promoting graywater reuse through an education and outreach program can encourage high levels of participation in conservation programs.
- Graywater reuse is a tool that can help reduce M&I demands for the South Platte Basin to the levels described in the Colorado Water Plan (page 6-27) and help conserve water as described in the South Platte BIP.
- The Graywater Education and Outreach Program described in this proposal will be shared with other agencies addressing water demand shortfalls and will be designed to be scalable so that it will be effective whether implemented on a small- or a large-scale.

Land Use



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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.

In order to reduce the amount of water needed for future generations of Coloradans and keep urban-adjacent agricultural lands in production, Colorado must support the growth of the next 5 million residents more strategically than the last 5 million. Colorado's Water Plan calls for a partnership among local water providers and Colorado's communities. This partnership aims to incorporate water-saving actions into local land-use planning. The CWCB will work with the Department of Local Affairs, local governments, water providers, Colorado Counties Inc., Colorado Municipal League, the Special District Association, councils of governments, and homebuilders (Colorado Association of Homebuilders) to examine and strengthen the tools they collectively possess to help Colorado reach this objective.

- An Education and Outreach Program promoting graywater reuse can help narrow the water demand / supply gap if graywater reuse is widely adopted. Graywater is a low-cost conservation measure which can save water in both indoor and outdoor setting and can help reduce capital outlays associated with water system upgrades as Colorado's population increases. Incorporation of graywater reuse into land-use planning allows for implementation of a well thought out, effective, sustainable water conservation approach as envisioned in Section 6.3.3 (Land Use) of the Colorado Water Plan (p. 6-83).
- Denver residents already have the option to incorporate water saving actions into their homes using graywater, but adoption levels have been low. Encouraging increased adoption of graywater through education and outreach is one way to raise awareness of water saving techniques among Coloradans.
- The long-term plan to move graywater from an option to a requirement under Denver's Green Building Code will result in new development and qualified redevelopment projects incorporating water saving systems into their plans by integrating water conservation into the City's land use and building codes.
- The Graywater Education and Outreach Program will help to strengthen the partnership between the City and County of Denver, Denver Water, non-profits working in the water conservation arena, home builders and developers, and the green industry and result in the incorporation of water-saving actions into land-use planning. (Chapter 6, Section 6.3.1 (Municipal Water Conservation), p. 6-73)
- The Project furthers the Colorado Water Plan's recognition that "graywater reuse should be an important component of new construction." (Chapter 6, Section 6.3.2. (Reuse), p. 6-75)

Agriculture

Colorado's Water Plan sets an objective that agricultural economic productivity will keep pace with growing state, national, and global needs, even if some acres go out of production.

To achieve this objective, the State will work closely with the agricultural community, in the same collaborative manner that has produced agricultural transfer pilot projects, to share at least 50,000 acre-feet of agricultural water using voluntary alternative transfer methods by 2030. Without a water plan, Colorado could lose up to 700,000 more acres of irrigated agricultural lands—that equals 20 percent of irrigated agricultural lands statewide and nearly 35 percent in Colorado's most productive basin, the South Platte. While the right to buy or sell water rights must not be infringed



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upon, Colorado's Water Plan describes market-competitive options to typical "buy-and-dry" transactions. Such alternative transfer methods can keep agriculturally dependent communities whole and continue agricultural production in most years, and if such arrangements can be made more permanent in nature, they will provide certainty to both municipal water providers and agricultural producers. Options include lease-fallowing agreements, deficit irrigation, water banking, interruptible supply agreements, rotational fallowing, water conservation programs, and water cooperatives. The State will encourage innovation and creativity by agricultural producers and research institutions to maximize the productivity of every drop of water.

- Graywater reuse in the Denver metropolitan area is a water conservation activity which can play an important role in balancing the need for additional water supply for the urban area.
- Graywater reuse can help reduce the increasing water needs of municipalities and industries that compete with agriculture for water supplies.

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.

Colorado's Water Plan will expand outreach and education efforts that engage the public to promote well-informed community discourse and decision making regarding balanced water solutions. This work will be collaborative and include state, local, and federal partners. As one component of this overall strategy, the CWCB will work with Colorado's innovation community, education and outreach experts, research institutions, and the Governor's Colorado Innovation Network (COIN) to address Colorado's water challenges with innovation and "outside-the-box" creativity. (Colorado Water Plan Executive Summary p. 15)

- The plan directly supports conservation and reuse education.
- The proposed graywater education and outreach program will help to strengthen the partnership between the City and County of Denver, Denver Water, non-profits working in the water conservation arena, home builders and developers, and the green industry.
- The Graywater Education and Outreach Program is specifically intended to increase the level of public awareness and engagement of techniques to conserve and reuse water. The project's partnership with Groundwork Denver will allow the plan to reach most homeowners in Denver (estimated to be more than 700,000 people).
- The Graywater Education and Outreach Program will consist of several communication vehicles, intended to offer opportunities for participation by different target audiences including homeowners, developers and builders, students, installers, and elected officials.

The Graywater Education and Outreach Program will advance numerous goals of the South Platte Basin Implementation Plan including:



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S.5.2 Maintain leadership in conservation and reuse and implement additional measures to reduce water consumption rates by establishing an education and outreach program specifically focused on increasing adoption of graywater, a way to conserve water through reuse.

S.5.3 Maximize use and effectiveness of native South Platte supplies by promoting activities that will reduce the use of South Platte Water for domestic / potable supplies.

S.5.5 Protect and enhance environmental and recreation attributes by maximizing opportunities which allow water to remain in waterways to support habitat.

S.5.8 Manage the risk of increased demands and reduced supplies due to climate change by promoting adoption of activities that maximize the use of every drop of water.

S.5.9 Facilitate effective South Platte communications and outreach programs that complement the state’s overall program through a robust public engagement process intended to improve public understanding of the potential for conservation available from indoor graywater use.

1.9.8 Meet Community Water Needs throughout Colorado by: 1) Using water efficiently with high levels of participation in conservation programs... by creating an education and outreach and an incentive program focused in increasing water use efficiency through reuse and to increase the level of participation in conservation programs including graywater reuse.

4.3.1.7 Conservation Summary the education and outreach program will enhance statewide education that will support higher levels of indoor conservation and will provide a model that is replicable and scalable for future water savings in communities throughout Colorado.

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.
Related studies and resources: <ul style="list-style-type: none"> • Denver One Water Plan (2021) – the graywater education and outreach program described in this application is one of the first steps the City of Denver is taking to implement the Denver One Water Plan. Development of the One Water Plan was funded by a CWCB grant to The Greenway Foundation in 2018. • Water Efficiency Plan (2017) – Denver Water • Colorado Water Plan (2015) (assists in implementation) • City and County of Denver Climate Adaptation Plan (2014) – Department of Environmental Health (assists in implementation) • Metro Vision 2035 (2011) – DRCOG

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.



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The following is a list of previous CWCB funding awarded to The City and County of Denver:

- Denver Parks; Central Control Build-out; Metro Basin RT; Approved at November 2018 meeting, Contract # POGG1 2019-2641, \$120,000 total approved amount.

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.

There are no known TABOR issues that would affect this application.

Submittal Checklist

X	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract .
X	Statement of Work ⁽¹⁾
X	Budget & Schedule ⁽¹⁾
N/A	Engineer's statement of probable cost (projects over \$100,000)
X	Letters of Matching and/or Pending 3 rd Party Commitments ⁽¹⁾
	Map (if applicable) ⁽¹⁾
	Photos/Drawings/Reports
X	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)
Water Sharing Agreements and Alternative Transfer Methods ONLY	
	Water Sharing Agreements and Alternative Transfer Methods 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)?
Who is/are the target audience(s)? How will you reach them? How will you involve the community?
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?



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Describe how you plan to measure and evaluate the success and impact of the project?
What research, evidence, and data support your project?
Describe potential short- and long-term challenges with 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."
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.
Describe how the project achieves the education, outreach, and public engagement goals set forth in the applicable Basin Implementation Plan(s).



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

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.
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:	12/1/21
Name of Grantee:	Denver Dept. of Public Health and Environment
Name of Water Project:	Education and Outreach Program for the City and County of Denver's Graywater Program
Funding Source:	CWCB and Project Partners
Water Project Overview:	
<p>Funding will be used to develop a graywater education and outreach program to help increase the adoption of graywater in Denver. The program will include door-to-door outreach in communities of need, workshops for homeowners and installers, and the establishment of an incentive fund for homeowners and builders / developers. Target audiences are:</p> <p>Existing homeowners</p> <ul style="list-style-type: none"> • Education about water conservation and graywater reuse • Installation of laundry to landscape graywater systems <p>Graywater system installers</p> <ul style="list-style-type: none"> • Education to ensure understanding of legal requirements and best practices • Provide education allowing qualification for City licenses required to install graywater systems <p>Home builders and developers of multi-family residential projects, hotels, and dorms</p> <ul style="list-style-type: none"> • Demonstrate cost / benefit • Install graywater systems to meet the requirements of Denver's green building code. <p>The Graywater Education and Outreach Program is specifically intended to increase the level of public awareness and engagement of techniques to conserve and reuse water.</p> <p>Materials developed using project funding will be made publicly available on the City and County of Denver's web page, will be provided to the CWCB for its use, and will be distributed through the Colorado Association of Homebuilders, the Home Builders Association of Metro Denver, the Colorado Green Building Guild, the Colorado Chapter of the US Green Building Council, and other appropriate professional groups and trade organizations.</p>	
Project Objectives:	

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Increased awareness of water supply / demand gap and options for water conservation. Creation of an education and outreach campaign and supporting materials and installer trainings which can be shared with local governments across Colorado. Increased adoption of graywater in Denver.

Secondary objectives include development of a list of effective incentives to encourage the use of graywater and quantification of water savings associated with graywater implementation.

Tasks
Task 1 – Development of Best Available Practices Worksheets
Description of Task:
<p>Develop a series of worksheets which provide guidance on existing regulations and permitting requirements for graywater systems, when graywater use is appropriate, and best practices for installation, operation, and maintenance of graywater systems. The worksheets will include information about potential risks of graywater use, graywater impacts on landscaping, and how to minimize those impacts. At a minimum, the following worksheets will be developed for use by developers, installers, and homeowners:</p> <ul style="list-style-type: none"> • Best practices for laundry to landscape graywater systems for homeowners • Best practices for gravity graywater systems from individual showers during a bathroom remodel for homeowners • Best practices for laundry to landscape & gravity graywater systems for installers. • Best practices for graywater systems producing water for toilet flushing for installers
Method/Procedure:
<p>DDPHE will work with a contractor and a non-profit to research and develop content for the worksheets. Research will focus on the topics listed in the task description and will include discussions with other municipalities, researchers, graywater system installers and manufacturers, and through internet-based literature reviews. The worksheets will be formatted by a graphic artist and translated to Spanish before use / distribution.</p>
Deliverable: Worksheets

Last Updated: May 2021

The deliverables for this task will be a series of best practices worksheets.

Worksheets will be created as templates so that other agencies wishing to use them can add their logos and branding.

Tasks

Task 2 – Door to Door Education and Outreach

Description of Task:

Graywater outreach programs will focus on two groups - youth and residents living in selected neighborhoods in Denver. The program will educate a core group of students and recent graduates about graywater and have them go door to door in low income neighborhoods (likely Denver’s Westwood, Globeville/Elyria-Swansea, Cole, Northeast Park Hill, and Montbello neighborhoods) to help residents understand the benefits of graywater use. The students will also give presentations to City Council, schools, neighborhood organizations, or other appropriate organizations.

Method/Procedure:

Door to door canvassing will be conducted once a year for 5 days and is anticipated to reach approximately 1000 homes per year. In addition to educating residents about water conservation and graywater reuse, canvassing efforts will encourage people to sign up for a free graywater demonstration project. The free graywater demonstration project will consist of an installed laundry-to-landscape system along with a use and maintenance guide. The team doing the canvassing will be trained to install the systems. We anticipate installing up to 5 laundry-to-landscape systems in low income neighborhoods per year.

The work of the students will be overseen by staff experienced in working at the community level to build capacity and advance the sustainable well-being of under-resourced populations.



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Deliverable:
<p>The deliverables for this project will include a maintenance manual for laundry to landscape graywater systems. Grant reports will include the following metrics:</p> <p>Number of people reached by education and outreach programs</p> <ul style="list-style-type: none"> • Number of door-to-door contracts • Number of presentations made and number of attendees at each presentation • Number of Laundry-to Landscape graywater systems installed <p>Before and after measures of water use in Denver</p> <ul style="list-style-type: none"> • Amount of water conserved • Savings realized by people with graywater systems (if possible)

Tasks
Task 3 – Graywater Installers Workshops
<p>Description of Task:</p> <p>A series of free workshops will be developed to educate developers, installers, and homeowners about graywater systems. Similar to the worksheets, the workshops will provide guidance on existing regulations and permitting requirements for graywater systems, when graywater use is appropriate, and best practices for installation, operation, and maintenance of graywater systems. The workshops will also include information about potential risks of graywater use, graywater impacts on landscaping, and how to minimize those impacts. Separate workshops will be developed for installers, developers, and homeowners. Each workshop will focus on topics appropriate for the intended audience (for example a workshop for homeowners might focus on laundry to landscape systems).</p> <ul style="list-style-type: none"> • Two workshops will be held each year for homeowners. These workshops will be free of charge to participants. • A total of four workshops will be held for installers. One in the first year of the grant, two the second year, and a final one in the third year. These workshops will also be free of charge to participants. • Upon completion, installers and homeowners who attended the workshops in person will be qualified to take the test for the appropriate license (homeowner or irrigation and graywater) as an installer in Denver. • The workshops will be developed and presented by a consultant or installer who specializes in graywater systems. We anticipate videotaping the workshops and making them available to anyone who could not attend. • Separate workshops will be offered for Spanish speakers or real-time Spanish translation will be offered at the workshops. <p>This task will consist of developing workshop content, scheduling, and teaching the workshops.</p>
Method/Procedure:



Last Updated: May 2021

Workshops will be delivered in person and will consist of the following:

Laundry to Landscape for Homeowners and/or Installers (one 6-8 hour day). The course will include:

- 2-3 hours in the classroom with overview of laws, system types, basics of plumbing
- 1 hour lunch
- 3-4 hours hands on installation of L2L system (parts, materials, and lunch supplied by homeowner or course host)

Greywater Installers comprehensive course (five 6-8 hour days). The course will include:

- Day 1 - Introduction to system types, plumbing, legal, permitting, and design
- Day 2 - Laundry to Landscape focus with 1/2 day hands-on (full system build)
- Day 3 - Gravity system focus with 1/2 day hands-on (with 3-way Actuator and ABS parts)
- Day 4 - Tank, Filter, Pump focus with 1/2 day irrigation & toilet flushing systems hands-on (exploring several branded products and DIY options)
- Day 5 - Review of system BMP's & permitting requirements + other system types (larger municipal systems, multi-use systems, constructed wetlands, infiltration chamber, toilet topper)
- Finish course with a test and Installer Certification process

Deliverable:

The deliverables for this project are metrics which will be summarized in required grant reports:

- Number of workshops held.
- Number of Attendees

Tasks

Task 4 - Establish Incentive Program

Description of Task:



Last Updated: May 2021

This task will involve the following:

- Research incentives used in other municipalities to understand what incentives are most effective. Examples of incentives include:
 - Offset cost of permitting
 - Offset costs of system installation
 - Reduce / offset tap fees (new install)
 - Accelerated review of permits.
 - Others?
- Program / incentive fund development
- Educating homeowners and developers about the incentive fund
- Administration of the incentive fund. Administrative duties include purchasing and distributing laundry to landscape kits, issuing rebates and reimbursements, tracking expenses and fund balances, and other required duties.

Method/Procedure:

Identification of the most effective techniques to incentivize graywater adoption will consist of web-based research, and interviews with installers, developers, and other municipalities with graywater programs. Once the research is complete, it will be used as the basis to establish an incentive fund to encourage adoption of graywater by developers and homeowners.

For homeowners, the incentive fund will support increased adoption of graywater reuse by:

- Providing free laundry to landscape install kits to homeowners who wish to install a graywater system.
- Offsetting permitting fees through waivers or rebates.
- Funding other incentives identified by research.

Increased adoption of graywater reuse by developers working on commercial and multifamily properties will be incentivized by:

- Subsidizing the installation of two or three projects which demonstrate benefits and costs for developers, home builders, and homeowners.
- Offsetting Denver Water's System Development charges. During the second and third years of the project, Denver Water will set aside a total of \$50,000 (\$25,000 each year) from its System Development Credit Pilot Program for commercial sites which install graywater. The program will offset a portion (20%) of Denver Water's System Development Charges for commercial projects which comply with Denver's Green Building Code and reduce water use by 25% when compared to traditional construction. The credits are available to any new development or redevelopment projects which implement water efficiency measures.
- Funding other incentives identified by research.

The number and type of incentives will depend on a number of factors, including socioeconomics, available funding, and which incentives are determined to be most attractive to homeowners, developers, and homebuilders.

Deliverable:

Last Updated: May 2021

The deliverables for this project are metrics which will be summarized in required grant reports:

- Number / cost of graywater incentives awarded

Tasks
Task 5 - City Policy Updates
Description of Task:
<p>In order to ensure the sustainability of graywater reuse in Denver, we plan on working towards incorporating graywater as a requirement under the Denver Green Building Code (it is currently included, but not specifically called out) to ensure that momentum gained is not lost after the funding for this project runs out.</p>
Method/Procedure:
<p>The Denver Green Building Code is updated by the City's Office of Climate Action, Sustainability and Resiliency. Denver Water and DDPHE will work through CASR and participate in their stakeholder process to ensure graywater requirements are inserted into the Green Building Code.</p> <p>During the first phase of the stakeholder process, Denver Water and DPHE will work to ensure that Green Building Code is updated to specifically call out graywater reuse as an option for meeting points required for qualifying buildings constructed in Denver. This work should happen in the first one to two years of the grant period. During the second phase of the stakeholder process, Denver Water and DPHE will work to ensure the Green Building Code is updated to require graywater reuse. The timeline for completion of the second phase is sometime between 2028 and 2030.</p>
Deliverable:



Last Updated: May 2021

Updates on the status of the stakeholder process will be included in required grant reports.

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 as part of the project documentation.

Performance Measures



Last Updated: May 2021

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 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.

Colorado Water Conservation Board
Water Plan Grant - Detailed Budget Estimate
Fair and Reasonable Estimate

Prepared Date: 12/1/21
Name of Applicant: Denver Department of Public Health and Environment
Name of Water Project: Graywater Education and Outreach Program

EXAMPLE A: Study or Project Coordination

Task 1 - Development of Best Available Practices Worksheets

Sub-task	Item	Hourly Rate	# Hours	Sub-total	Item Cost	Item Quantity	Sub-total	Total	CWCB Funds	Matching Funds
Project Management										
Program administration (contracts, budgeting, project oversight, reporting)	DPHE Program Administrator	\$ 72.73	80	\$ 5,818.40			\$ -	\$ 5,818.40	\$ -	\$ 5,818.40
Contracts and Purchasing	DPHE Contracts Administrator	\$ 54.02	60	\$ 3,241.20			\$ -	\$ 3,241.20	\$ -	\$ 3,241.20
Background Research & Content Development										
	Western Resource Advocates	\$ 125.00	50	\$ 6,250.00			\$ -	\$ 6,250.00	\$ 6,250.00	\$ -
	Colorado Graywater	\$ 150.00	60	\$ 9,000.00			\$ -	\$ 9,000.00	\$ 9,000.00	\$ -
Layout & Translation										
Contractor	Graphic layout for web and print			\$ -	\$ 5,000.00	1.00	\$ 5,000.00	\$ 5,000.00	\$ -	\$ 5,000.00
Contractor	Translation			\$ -	\$ 2,000.00	1.00	\$ 2,000.00	\$ 2,000.00	\$ -	\$ 2,000.00
TOTAL								\$ 31,309.60	\$ 15,250.00	\$ 16,059.60
Other Direct Costs (see below)								\$ 800.00	\$ -	\$ 800.00
OVERALL TOTAL								\$ 32,109.60	\$ 15,250.00	\$ 16,859.60

Other Direct Costs

Item:	Copies & Printing (Black & White)	Copies & Printing (Color)						Total
Units:	No.	No.						
Unit Cost:	\$0.10	\$0.50						
Completed Worksheets (2 sided)		1,000						
Annual Reports		3,000						
Total Units:		3,000	1,000					
Total Cost:	\$300	\$500	\$0	\$0	\$0	\$0	\$800	



Colorado Water Conservation Board
Water Plan Grant - Detailed Budget Estimate
Fair and Reasonable Estimate

Prepared Date: 12/1/21

Name of Applicant: Denver Department of Public Health and Environment

Name of Water Project: Graywater Education and Outreach Program

EXAMPLE A: Study or Project Coordination

Task 2 - Door to Door Education and Outreach

Sub-task	Item	Hourly			Sub-total	Item			Total	CWCB Funds	Matching Funds
		Rate	# Hours			Item Cost	Quantity	Sub-total			
Project Management											
Program administration (contracts, budgeting, project oversight, reporting)	DPHE Program Administrator	\$ 72.73	240		\$ 17,455.20				\$ 17,455.20	\$ -	\$ 17,455.20
Contracts and Purchasing	DPHE Contracts Administrator	\$ 54.02	20		\$ 1,080.40				\$ 1,080.40	\$ -	\$ 1,080.40
Project Oversight											
Supervision	GWD Associate Director	\$ 68.73	140		\$ 9,622.20				\$ 9,622.20	\$ 9,622.20	\$ -
Coordination	GWD GI Program Training Coordinator	\$ 28.28	303		\$ 8,568.84				\$ 8,568.84	\$ -	\$ 8,568.84
Coordination	GWD Youth Programs Director	\$ 41.63	200		\$ 8,326.00				\$ 8,326.00	\$ 8,326.00	\$ -
Training and Licensing											
	Green Corps Supervisor	\$ 27.46	24		\$ 659.04				\$ 659.04	\$ 659.04	\$ -
	Green Corps Members	\$ 23.84	120		\$ 2,860.80				\$ 2,860.80	\$ 2,860.80	\$ -
Canvassing											
	Green Corps Supervisor	\$ 27.46	120		\$ 3,295.20				\$ 3,295.20	\$ 3,295.20	\$ -
	Green Corps Members	\$ 23.84	600		\$ 14,304.00				\$ 14,304.00	\$ 14,304.00	\$ -
	Laundry to Landscape Supplies				\$ -	\$ 500.00	15.00	\$ 7,500.00	\$ 7,500.00	\$ 2,500.00	\$ 5,000.00
	Tools for System Installation				\$ -	\$ 750.00	1.00	\$ 750.00	\$ 750.00	\$ -	\$ 750.00
System Installs											
	Green Corps Supervisor	\$ 27.46	120		\$ 3,295.20				\$ 3,295.20	\$ 3,295.20	\$ -
	Green Corps Members	\$ 23.84	600		\$ 14,304.00				\$ 14,304.00	\$ 14,304.00	\$ -
Develop Maintenance Manual											
	Green Corps Supervisor	\$ 27.46	4		\$ 109.84				\$ 109.84	\$ 109.84	\$ -
	Green Corps Members	\$ 23.84	20		\$ 476.80				\$ 476.80	\$ 476.80	\$ -
	Translator	\$ 50.00	8		\$ 400.00				\$ 400.00	\$ -	\$ 400.00
Presentations											
	Green Corps Supervisor	\$ 27.46	48		\$ 1,318.08				\$ 1,318.08	\$ 1,318.08	\$ -
	Green Corps Members	\$ 23.84	240		\$ 5,721.60				\$ 5,721.60	\$ 5,721.60	\$ -
TOTAL									\$ 100,047.20	\$ 66,792.76	\$ 33,254.44
Other Direct Costs (see below)									\$ 480.00	\$ 420.00	\$ 60.00
OVERALL TOTAL									\$ 100,527.20	\$ 67,212.76	\$ 33,314.44

Other Direct Costs

Item:	Copies & Printing (Black & White)		Mileage						Total
	Units:	No.	Per Mile						
Unit Cost:		\$0.10	\$ 0.560						
Canvassing			300	300					\$198
L2L System Installs (15 total)				450					\$252
Maintenance Manuals (15 copies)			300						\$30
Total Units:		600	750	0	0	0	0		
Total Cost:		\$60	\$420	\$0	\$0	\$0	\$0		\$480

Colorado Water Conservation Board
Water Plan Grant - Detailed Budget Estimate
Fair and Reasonable Estimate

Prepared Date: 12/1/21
Name of Applicant: Denver Department of Public Health and Environment
Name of Water Project: Graywater Education and Outreach Program

EXAMPLE A: Study or Project Coordination

Task 3 - Graywater Installers Workshops

Sub-task	Item	Hourly Rate	# Hours	Sub-total	Item Cost	Item Quantity	Sub-total	Total	CWCB Funds	Matching Funds
Project Management										
Program administration (budgeting, project oversight, reporting)	DPHE Program Administrator	\$ 72.73	120	\$ 8,727.60			\$ -	\$ 8,727.60	\$ -	\$ 8,727.60
Workshops										
6 one day classes, 4 five day classes	Lead Instructor	\$ 150.00	208	\$ 31,200.00			\$ -	\$ 31,200.00	\$ 31,200.00	\$ -
6 one day classes, 4 five day classes	Assistant Instructor	\$ 100.00	208	\$ 20,800.00			\$ -	\$ 20,800.00	\$ 20,800.00	\$ -
6 one day classes, 4 five day classes (contracted)	Translator			\$ -	\$ 400.00	26.00	\$ 10,400.00	\$ 10,400.00	\$ -	\$ 10,400.00
TOTAL								\$ 71,127.60	\$ 52,000.00	\$ 19,127.60
Other Direct Costs (see below)								\$ 1,000.00	\$ -	\$ 1,000.00
OVERALL TOTAL								\$ 72,127.60	\$ 52,000.00	\$ 20,127.60

Other Direct Costs

Item:	Copies & Printing (Black & White)	Total
Units:	No.	
Unit Cost:	\$0.10	
Course Manuals	10,000	\$1,000
Total Units:	10,000	
Total Cost:	\$1,000	\$1,000

Task Description

Project Initiation / Administration

1 Development of Best Available Practices Worksheets

2 Door to Door Education and Outreach

3 Graywater Installers Workshops

4 Incentive Programs

5 City Policy Updates

 Project Milestone

Subtask

CWCB-DDPHE Contracting
Reporting

Project Management
Contracting with Subs
MOU with Denver Water
Background Research
Prepare Worksheet Content
Translation
Graphic Layout
Distribution

Project Management
Contracting with Subs
Training and Licensing
Canvassing
System Installs
Develop Maintenance Manual
Presentations

Project Management
1 Day Workshops
5 Day Workshops

Project Management / Administration
Contracting with Subs
Incentives Research
Develop Program Guidelines / Set Up Funding Mechanisms
Identify Developer Pilot Projects
L2L Build Kit Purchasing
Manage L2L Kit Giveaways
Manage Other Incentives

Revise Denver Green Building Code

Responsible Entity

Responsible Entity	2022												2023					
	Q1			Q2			Q3			Q4			Q1			Q2		
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
CWCB, DDPHE DDPHE					◆							◆						◆
DDPHE DDPHE DDPHE, Denver Water Colorado Graywater, Western Resource Advocates Colorado Graywater, Western Resource Advocates TBD TBD DDPHE and Partners												◆						
DDPHE DDPHE Colorado Graywater, Groundwork Denver Groundwork Denver Groundwork Denver Groundwork Denver Groundwork Denver																		
DDPHE Colorado Graywater Colorado Graywater																		
DDPHE DDPHE Western Resource Advocates DDPHE, Contractor Contractor DDPHE, Contractor Contractor DDPHE, Denver Water												◆						
DDPHE, Denver Water						◆												

		2024				2025										
Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	◆				◆					◆					◆	

December 1, 2021

Kevin Reidy
Colorado Water Conservation Board
Department of Natural Resources
1313 Sherman St.
Room 718
Denver, CO 80203

Re: Commitment Letter – Denver Water Plan Grant Proposal

Dear Mr. Reidy,

Denver Water is pleased to participate as a partner with Denver Department of Public Health and Environment (DDPHE) on their Water Plan Grant Proposal to fund a Graywater Education and Outreach Program.

DDPHE's proposal is the first step the City and County of Denver is taking towards implementation of Denver's One Water Plan, a plan developed with funding from the Colorado Conservation Board. The proposal seeks to increase adoption of graywater through a combination of door-to-door outreach, training, incentives, and changes to Denver's Green Building Code. When completed the program will serve as a model for other Colorado communities seeking to create education and outreach campaigns related to graywater.

Graywater reuse is a "no-and-low regret" conservation strategy that can help reduce demand on public water supplies treated to drinking water standards. Denver Water supports the proposal because increased adoption of graywater can help meet the Colorado Water Plan and South Platte Basin Implementation Plan goals of increasing water conservation.

As a partner, Denver Water commits to assisting the project by; working with the City and County of Denver to improve institutional processes of permitting and monitoring Gray Water systems, identifying new projects that can be used as demonstration projects to help train new Gray Water installers in the Denver Metro Area, and including alternative water source systems in the Denver Water System Development Credit Pilot. The approximate monetary value of this contribution is \$50,000, primarily to be spent in years 2 and 3 of the grant.

We look forward to participating in this important project. If you have any questions regarding our participation, please contact us.

Sincerely,



Austin Krcmarik
Demand Planning and Efficiency
Denver Water



November 22, 2021

Kevin Reidy
Colorado Water Conservation Board
Department of Natural Resources
1313 Sherman St.
Room 718
Denver, CO 80203

Re: Commitment Letter – Denver Water Plan Grant Proposal

Dear Mr. Reidy,

Groundwork Denver is pleased to participate as a partner with Denver Department of Public Health and Environment (DDPHE) on their Water Plan Grant Proposal to fund a Graywater Education and Outreach Program.

DDPHE's proposal is the first step the City and County of Denver is taking towards implementation of Denver's One Water Plan, a plan developed with funding from the Colorado Conservation Board. The proposal seeks to increase adoption of graywater through a combination of door-to-door outreach, training, incentives, and changes to Denver's Green Building Code. When completed the program will serve as a model for other Colorado communities seeking to create education and outreach campaigns related to graywater.

Graywater reuse is a "no-and-low regret" conservation strategy that can help reduce demand on public water supplies treated to drinking water standards. Groundwork Denver supports the proposal because increased adoption of graywater can help meet the Colorado Water Plan and South Platte Basin Implementation Plan goals of increasing water conservation.

As a partner, Groundwork Denver commits to assisting the project by supporting outreach and education activities and providing staff time to coordinate trainings. The approximate monetary value of this contribution is \$8,565.

We look forward to participating in this important project. If you have any questions regarding our participation, please contact us.

Sincerely,

A handwritten signature in black ink, appearing to be "C88", written in a cursive style.

Cindy Chang
Executive Director



PROTECTING THE WEST'S LAND, AIR, AND WATER

November 18, 2021

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

Re: Letter of Support for Denver Water Plan Grant Proposal

Dear Mr. Reidy,

Western Resource Advocates supports the Denver Department of Public Health and Environment's (DDPHE) Water Plan Grant Proposal to fund a Graywater Education and Outreach Program. Not only do we support the proposed program, but we are looking forward to partnering with DDPHE to help implement the program if it is funded.

DDPHE's proposal is the first step the City and County of Denver is taking towards implementation of Denver's One Water Plan, a plan developed with funding from the Colorado Conservation Board. The proposal seeks to increase adoption of graywater through a combination of door-to-door outreach, training, incentives, and changes to Denver's Green Building Code. When completed the program will serve as a model for other Colorado communities seeking to create education and outreach campaigns related to graywater.

Graywater reuse is a "no-and-low regret" conservation strategy that can help reduce demand on public water supplies treated to drinking water standards. Western Resource Advocates supports the proposal because increased adoption of graywater can help meet the Colorado Water Plan and South Platte Basin Implementation Plan goals of increasing water conservation.

Sincerely,

Bart Miller
Healthy Rivers Program Director
Western Resource Advocates