

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:

Supply and Demand Gap Projects: Gregory.Johnson@state.co.us

Water Storage Projects: Anna.Mauss@state.co.us

Conservation, Land Use Planning: Kevin.Reidy@state.co.us

Engagement & Innovation Activities: Mara.MacKillop@state.co.us

Agricultural Projects: Brent.Newman@state.co.us

Environmental & Recreation Projects: Linda.Bassi@state.co.us

Applicants interested in submitting an 'Intent to Apply' in the future are encouraged to check here and fill in all sections with the best information available at the time. Exhibits excluded.



Water Project Summary

Name of Applicant	WateReuse (WateReuse Colorado		
Name of Water Project	Development	Development of Colorado Guidelines for Direct Potable Reuse		
CWP Grant Request Amount		\$65,000		
Other Funding Sources	ver Water	\$ 3,000		
Other Funding Sources <u>Aurora Water</u>		\$ 5,000		
Other Funding Sources Castle Rock Water		_ \$ 2,500		
Other Funding Sources SMWSA		_ \$ 2,500		
Other Funding Sources Plum Cr WRA		\$ 1,000		
Other Funding Sources Carollo Engineering		\$ 5,000		
Other Funding Sources CH2	N	\$ 2,000		
Other Funding Sources MSK	Consulting	\$ 2,000		



Water Project Summary			
Other Funding Sources Stantec	\$ 2,000		
Applicant Funding Contribution	\$10,000		
NOTE: In addition to providing matching funds, Significant in-kind contributions will be provided by the project contributors above and others in support of the project.			
Total Project Cost	\$100,000		

Applicant & Grantee Information				
Name of Grantee(s)	WateReuse Association (contracting agent)			
Mailing Address	1199 North Fairfax Street, Suite 900, Alexandria, VA 22314			
FEIN	68-0235568			
Organization Contact	Pat Sinicropi			
Position/Title	Executive Director			
Email	psinicropi@watereuse.org			
Phone	703-548-0880 (main)			
Grant Management Contact	Maria Greenly			
Position/Title	Accounting Manager			
Email	mgreenly@watereuse.org			
Phone	571-445-5500			
Name of Applicant (if different than grantee)	WateReuse Colorado (applicant is state section of the contracting agent which is the national WateReuse Association).			
Mailing Address	c/o Laura Belanger, WRA, 2260 Baseline Rd #200 Boulder, CO 80302			
Position/Title	Past President, WateReuse Colorado			
Email	laura.belanger@westernresources.org			
Phone	720-763-3718			

Description of Grantee/Applicant

Provide a brief description of the grantee's organization (100 words or less).

WateReuse Colorado (WRCO) is the state section of the national WateReuse Association. WateReuse Colorado is comprised of a broad range of reuse professionals, including the state's preeminent voices in water reuse – municipal water providers, users of recycled water, engineering consultants, regulators, and researchers. Our primary objectives include supporting the mission of the WateReuse Association¹, advocating for legislation and regulations that facilitate appropriate water reuse, promoting safe and effective reuse throughout Colorado, and improving public understanding of water reuse.

¹ The mission of the national WateReuse Association is to educate the public on the importance of reusing water and to advocate for policy, laws and funding to increase water reuse in communities across the United States.



Last Updated: July 2017

Type of Eligible Entity (check one)

	Public (Government): Municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.					
	Public (Districts): Authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises.					
	Private Incorporated: Mutual ditch companies, homeowners associations, corporations.					
	Private Individuals, Partnerships, and Sole Proprietors: Private parties may be eligible for funding.					
Х	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)				
Х	Study			
	Construction			
Х	Identified Projects and Processes (IPP)			
	Other			

(Category of Water Project (check all that apply and include relevant tasks)					
x		d Demand Gap Projects - Multi-beneficial projects and those projects identified in basin ation plans to address the water supply and demand gap.				
	Applicable	Exhibit A Task(s): All				
	recharge in storage ca	Water Storage Projects - Projects that facilitate the development of additional storage, artificial recharge into aquifers, and dredging existing reservoirs to restore the reservoirs' full decreed storage capacity. <i>Applicable Exhibit A Task(s):</i>				
x	Conservation and Land Use Planning Projects - Activities and projects that implement long-term strategies for conservation, land use, and drought planning.					
	Applicable Exhibit A Task(s): All					
	Engagement & Innovation Projects - Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application available on the website. Applicable Exhibit A Task(s):					
	Agricultural Projects - Projects that provide technical assistance and improve agricultural efficiency. Applicable Exhibit A Task(s):					
	Environmental & Recreation Projects – Projects that promote watershed health, environmental health, and recreation. Applicable Exhibit A Task(s):					
	Other	Explain:				



Last Updated: July 2017

Location of Water Project				
Please provide the general county and coordinates of the proposed project below in decimal degrees . The Applicant shall also provide, in Exhibit C, a site map if applicable.				
County/Counties	This project is designed to foster the reuse of legally reusable water supplies to help meet Colorado's M&I water supply gap. While the majority of reuse is expected to be implemented along Colorado's Front Range, the project is focused on statewide regulations.			
Latitude	NA			
Longitude	NA			

Water Project Overview

Please provide a summary of the proposed water project (200 words or less). Include a description of the project and what the CWP Grant funding will be used for specifically (e.g., studies, permitting process, construction). Provide a description of the water supply source to be utilized or the water body affected by the project, where applicable. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, and area of habitat improvements, where applicable. If this project addresses multiple purposes or spans multiple basins, please explain.

The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, Other Funding Sources/Amounts and Schedule.

Colorado does not have direct potable reuse (DPR) regulations and no federal regulations exist. Utilities with reusable supplies considering DPR face uncertainty regarding design, operational and cost requirements. WateReuse Colorado (WRCO) is working on a collaborative project to develop a DPR regulatory framework to be completed in early 2018. Deliverables from that are a critical first step for DPR to become viable in Colorado. Next details of proposed DRP Regulations, Policy, and Guidelines must be filled in. This project relies on a panel of state and national experts, CDPHE, and stakeholders to:

- Define proposed DPR treatment, monitoring and management guidelines that are protective of public health and enable communities to make sound investments in infrastructure,
- Detail content of proposed CDPHE Regulations, Policy, and Guidelines
- Recommend pollutant concentrations and removal rates based on peer-reviewed research.

The panel will create an interim "Colorado Guidelines for Direct Potable Reuse" including all technical information needed to draft a formal proposal for regulations. Project funds will support NWRI to manage the panel, panel expenses, and Western Resource Advocates to serve as the local project manager. This project will help Colorado communities optimize on reusable water supplies, alleviating pressure on streams, the West Slope and agricultural sources.



Measurable Results To catalog measurable results achieved with the CWP Grant funds, please provide any of the following values as applicable: New Storage Created (acre-feet) New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive Existing Storage Preserved or Enhanced (acre-feet) Length of Stream Restored or Protected (linear feet) Efficiency Savings (indicate acre-feet/year OR dollars/year) Area of Restored or Preserved Habitat (acres) Quantity of Water Shared through Alternative Transfer Mechanisms Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning Direct potable reuse (DPR) ultimately resulting from the project, combined with indirect potable (IPR) and non-potable reuse will help ensure communities are able to optimize on 58,135 AF of reuse Identified Projects and Processes (IPPs) in the South Platte Assists in achieving Basin Implementation Plan (SPBIP), where much new reuse will 58.000+ AF of South occur. The Arkansas BIP did not detail reuse IPPs or vields, but Platte BIP reuse IPPs and SWSI 2010 identified 23,000 to 32,000 AF of reuse IPPs in the 23,000 to 32,000 AF of Other Arkansas Basin. Additional opportunities also exist (though there Arkansas Basin reuse is some overlap with the reuse IPPs) associated with agricultural IPPs identified in SWSI transfer and transbasin IPPs which are typically, though not 2010 always, reusable. Additional reuse IPPs and opportunities occur in other basins. Potable reuse may also increase some reuse IPP yields due to subsequent reuse of reusable return flows from indoor uses.

Water Project Justification

Provide a description of how this water project supports the goals of <u>Colorado's Water Plan</u>, the most recent <u>Statewide Water Supply Initiative</u>, and the applicable Roundtable <u>Basin Implementation Plan</u> and <u>Education Action Plan</u>. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers).

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

Colorado's Water Plan, SWSI, and many of the BIPs emphasize the reuse of fully consumable supplies as an important component to reduce the municipal and industrial (M&I) Gap.

<u>Colorado's Water Plan (CWP)</u> recognizes that "Water conservation activities and water reuse will play an important role in balancing the need for additional water supply with strategies to lessen that need" (CWP p.6-59). The Water Plan also acknowledges that the "Widespread development of potable reuse will be an important facet of closing the future water supply-demand gap" (CWP p.6-75).



Last Updated: July 2017

Water Project Justification

The project conforms to the <u>CWP framework</u> (CWP p.9-43 to 9-44). It helps meets reuse and other goals identified in the BIPs, is collaborative with multiple benefits, involves a broad set of local stakeholders (including regulators, water users, conservation organizations and others), addresses the M&I gap, is identified as part of the no-and low-regrets scenario planning process ("Implement water reuse strategies"). The project is sustainable and helps meet CWP conservation goals, avoids adverse environmental impacts, and maximizes the use of water resources (through reuse). The project is cost-effective and leverages contributions and in-kind inputs from numerous stakeholders.

One of the "actions" in the reuse section of the plan is "Clarify the regulatory environment: Over the next two years, the CWCB and the CDPHE will work with stakeholders to examine the application of water quality regulations to reuse water. The aim will be to identify potential change that fosters permanent growth in the reuse of limited water supplies, and that protects health and the environment" (CWP p.6-81). Water Plan Critical Actions include "Evaluate regulations to foster reuse of water supplies while protecting health and the environments" (CWP p.10-14).

The <u>South Platte BIP (SPBIP)</u>, where much additional reuse will likely occur, includes a solution to "Maintain leadership in conservation and reuse and implement additional measures to reduce water consumption rates" (SPBIP p.S-12) and a recommendation to "Implement additional reuse where practicable" (SPBIP p.S-13). The SPBIP's vision for meeting the east slope municipal gap includes "Reaching enhanced levels of municipal conservation and reuse" (SPBIP p.1-20). The SPBIP includes 13 reuse-specific IPPs (SPBIP Table 4-10, p.4-25) as well as agricultural transfer and transbasin IPPs where supplies could likely be further stretched to meet additional demands via reuse.

The Arkansas BIP says "The unmet demands for both municipal and agricultural future demands will have to be met from better management of existing supplies including reuse of transbasin water supplies to the maximum potential importance of reusing transbasin water supplies to the maximum potential..." (Ark BIP p.108). The Colorado BIP theme 4 is to "Encourage a high level of basinwide conservation" stating "Although many stakeholders within the Basin have begun to embrace the importance of conservation, more conservation, efficiency and reuse efforts are needed" (COBIP p. 16). The Colorado BIP also say, that from a policy perspective "TMDs should be the last "tool" considered as a water supply solution,...- and once everything that can be done to conserve and reuse water has been undertaken" (CO BIP p.18). The Gunnison BIP states "Entities must first reuse all legally available reusable water supplies to the maximum extent possible prior to further development of Colorado River System water" (Gun BIP p.42). The Southwest BIP states "Municipalities receiving water from a new TMD will fully develop their existing water supplies within their basin (such as reuse strategies, storage, etc.)" (SWBIP p.101) and "The Roundtable continues to firmly believe that conservation and reuse must be a major means to reduce demand and address future gaps and that no TMD should proceed unless high level conservation goals are achieved" (SWBIP p.102).

<u>SWSI 2010</u> says "Providing an adequate water supply for Colorado's citizens, agriculture, and the environment will involve implementing a mix of local water projects and processes, conservation, reuse, agricultural transfers, and the development new water supplies, all of which should be pursued concurrently" (SWSI p.1-1). SWSI identifies 43,000 – 61,000 acre-feet of supplies from reuse IPPs in the Arkansas, Metro and South Platte Basins (SWSI Table 5-1, p.5-5).



Last Updated: July 2017

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.

This project is the necessary next step to implement the deliverables from an ongoing collaborative WRCO project that is developing a proposed framework for DPR regulations. That ongoing project, "Advancing Direct Potable Reuse to Optimize Water Supplies and Meet Future Demands", will be completed in early 2018. It was funded by numerous stakeholders and Statewide, Colorado, Metro, South Platte and North Platte Basin WSRA grants. In addition to this proposed project to develop Colorado guidelines for DPR, other WRCO members are discussing related projects to advance DPR, such as a pilot DPR treatment facility, all of which will build off existing work and cumulatively help move Colorado in the right direction to implement DPR regulations and to increase public acceptance and understanding of potable reuse.

Additional related studies include a 2011 WSRA funded project "Demonstration of Membrane Zero Liquid Discharge Process for Drinking Water Systems" and a 2015 white paper "Considering the Implementation of Direct Potable Reuse in Colorado". A May 2015 Colorado Direct Potable Reuse Workshop, supported in part by WateReuse Colorado, was also held in association with the DPR white paper.

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.

- 1) WateReuse Colorado (contracting agent is WateReuse Association)
- 2) "Advancing Direct Potable Reuse to Optimize Water Supplies and Meet Future Demands"
- 3) Approving Roundtables: Metro, Colorado, South Platte, North Platte
- 4) CWCB grant approval was given at March 16, 2016 board meeting
- 5) Contract number: CTGG1 2016-2037
- 6) CWCB statewide and basin (Metro, Colorado, South Platte & North Platte) WSRA funds account for 62% of funding for the overall project

Taxpayer Bill of Rights

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

WateReuse Colorado and the WateReuse Association do not anticipate any TABOR issues.



Last Updated: July 2017

Submittal Checklist				
Х	I acknowledge the Grantee will be able to contract with CWCB using the <u>Standard Contract</u> .			
Exhibit A	- To be developed for grant application			
X	Statement of Work ⁽¹⁾			
X	Budget & Schedule ⁽¹⁾ (Spreadsheet)			
X	Letters of Matching and/or Pending 3 rd Party Commitments ⁽¹⁾			
Exhibit C ·	To be developed for grant application			
NA	Map (if applicable) ⁽¹⁾			
NA	Photos/Drawings/Reports			
Pending	Letters of Support (Support letter from Basin Roundtable encouraged) – CO BRT support was approved of at 9/25 meeting (letter is pending), support is pending from Metro and South Platte Basin Roundtables.			
Attached	Letter of Support – CDPHE WQCD Safe Drinking Water Program			
Upon Board approval	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)			
Engageme	Engagement & Innovation Grant Applicants ONLY			
NA	Engagement & Innovation Supplemental Application ⁽¹⁾			

(1) Required with application.

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

EXHIBIT A

WateReuse Colorado Water Plan Grant Application to the CWCB

- Statement of Work
- Budget & Schedule
- Letter of Matching 3rd Party Commitments
 - o Aurora Water
 - o Denver Water
 - South Metro Water Supply Authority
 - o Castle Rock Water
 - Plum Creek Water Reclamation Authority
 - o Carollo Engineers
 - MSK Consulting
 - o CH2M
 - o Stantec



Colorado Water Conservation Board

Water Plan Grant - Exhibit A

Statement Of Work			
Date:	October 1, 2017		
Name of Applicant:	WateReuse Colorado		
Name of Water Project:	Development of Colorado Guidelines for Direct Potable Reuse		
Funding Source:	Conservation, Land Use Planning CWP Grant		
Water Project Overview: Please provide a summary of the proposed water project (200 words or less).			

The same summary can be used from Page 5 of the CWP Grant Application.

Colorado does not have direct potable reuse (DPR) regulations and no federal regulations exist. Utilities with reusable supplies considering DPR face uncertainty regarding design, operational and cost requirements. WateReuse Colorado (WRCO) is working on a collaborative project to develop a DPR regulatory framework to be completed in early 2018. Deliverables from that are a critical first step for DPR to become viable in Colorado. Next details of proposed DRP Regulations, Policy, and Guidelines must be filled in. This project relies on a panel of state and national experts, CDPHE, and stakeholders to:

- Define proposed DPR treatment, monitoring and management guidelines that are protective of public health and enable communities to make sound investments in infrastructure,
- Detail content of proposed CDPHE Regulations, Policy, and Guidelines
- Recommend pollutant concentrations and removal rates based on peer-reviewed research.

The panel will create an interim "Colorado Guidelines for Direct Potable Reuse" including all technical information needed to draft a formal proposal for regulations. Project funds will support NWRI to manage the panel, panel expenses, and Western Resource Advocates to serve as the local project manager. This project will help Colorado communities optimize reusable water supplies, alleviating pressure on streams, the West Slope and agricultural sources.

Objectives: List the objectives of the project.

Increase opportunities for communities to reuse fully-consumable water supplies, helping meet the M&I supply gap by:

- Increasing regulatory certainty for utilities considering DPR
- Building on the deliverables of WRCO's current DPR project to fill in needed information for proposed Regulations, Policy, and Guidelines working with a small expert panel, the CDPHE Water Quality Control Division's Safe Drinking Water program, and WRCO stakeholders.
- Defining treatment and monitoring to establish Colorado Guidelines for Direct Potable Reuse that are flexible and protect public health,
- Detailing the Regulations, Policy, and Guidelines concepts necessary for each of the categories that have been defined under the WRCO's current DPR project. These are: Terminology, Source Control, Wastewater Treatment, Pathogen Disinfection/Removal, Chemical Pollutant



- Removal, Advanced Treatment Processes, Monitoring Requirements, and Education and Outreach. (Additional categories to be addressed by CDPHE that may be covered to some extent, but are outside the scope of this proposed project, are: Reporting, Facility Operations/Certification Programs, Technical/Managerial/Financial Capacity.)
- Providing recommendations for specific pathogen and chemical pollutant concentrations and removal rates based on peer-reviewed research to support a DPR regulation proposal and supporting policies.

Tasks

Provide a detailed description of each project task using the following format:

Task 1 – Organize Independent Advisory Panel

Description of Task:

The current WRCO DPR project will conclude in early 2018 with a deliverable that includes a framework outlining the components of a DPR regulatory structure. This will include a wide range of components that will go into DPR regulation, policy, and guidance documents. That effort is the launching point for this second phase of work to maintain momentum on DPR regulatory implementation. Our approach will develop a small expert panel to work with CDPHE and WRCO stakeholders to create an interim guidance document entitled "Colorado Guidelines for Direct Potable Reuse" that includes all technical information needed for CDPHE to draft formal DPR regulations and develop the final regulatory framework. The expert panel will include five to six nationally recognized experts in fields such as engineering, public policy, water chemistry, public health, and microbiology. The expert panel, often termed an "Independent Advisory Panel" (IAP), has been successfully used internationally and in states across the country to aid in potable reuse regulatory development.

The National Water Research Institute (NWRI) has successfully organized and facilitated IAPs working in collaboration with local and statewide stakeholders. The NWRI IAP will create the "Colorado Guidelines for Direct Potable Reuse" in partnership with WRCO and CDPHE as their direct clients and with the express objective to provide guidance that meets the collective needs while maintaining an important measure of independence. NWRI often partners with a local entity to leverage that partner's "on the ground" knowledge and to assist in managing the project. Western Resource Advocates (WRA) will fill this role on this Project. CDPHE and WRCO stakeholders' time and expenses will be "in-kind" contributions to the project.

Method/Procedure:

<u>Assemble the Independent Advisory Panel (IAP)</u> - As soon as feasible, The NWRI team (NWRI and WRA) will work with CDPHE and WRCO stakeholders to finalize IAP members. This collaborative process will include:

- Submit all prospective IAP members to an appropriate conflict check including financial interests and prior relationships.
- Select the IAP Chair based on overall expertise and leadership.
- Finalize the list of candidates based on experience and recommendations (including recommendations from the Chair) to be reviewed by CDPHE and WRCO stakeholders.
- Determine the availability and commitment of candidates.
- Compile resumes of candidates and submit to CDPHE and WRCO stakeholders for review.
- Finalize the selection of IAP members.



Last Updated: July 5, 2017

Tasks

<u>Develop the Scope of Review</u> – NWRI will work with WRCO and the IAP Chair to develop a scope and approach for the IAP review. This collaborative process will include:

- Gather background materials relevant to developing the scope and approach for the IAP review with specific emphasis on how to best enable the IAP to develop a comprehensive understanding of project goals.
- Meet in-person or over the phone to discuss the IAP process, charge, objectives, and possible outcomes.
- Develop the detailed scope of IAP review.
- Distribute the scope document to all panel members, along with relevant background materials.
- Finalize IAP membership to include a range of relevant expertise and members from Colorado as well as other states.

Grantee Deliverable: Describe the deliverable the grantee expects from this task

Formation of IAP and scope of review

CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task

IAP membership and scope of review

Tasks

Provide a detailed description of each task using the following format:

Task 2 – Independent Advisory Panel Meetings

Description of Task:

NWRI currently anticipates four meetings are necessary for the IAP. The IAP will convene three inperson meetings in Denver and one web-enabled conference call to present and report progress on the DPR guidance document. CDPHE and WRCO stakeholders, organized by WRA, will be invited to attend and provide comments. The WRCO stakeholder group will include utilities and consultants that are participating in the current WRCO DPR regulatory project with a few possible modifications.

Travel expenses for the IAP members, as well as any meeting expenses will be covered in this task. CDPHE and WRCO stakeholders' time and expenses will be "in-kind" contributions to the project.

Meeting agendas will include presentations on relevant topics, as well as discussions with CDPHE, WRCO stakeholder and the NWRI team. Meeting participants will include IAP members, NWRI staff, WRCO stakeholders, CDPHE, and WRA. In addition, representatives of additional local and state agencies, and others with interest in the project, may be invited to attend and/or participate at these meetings.

Method/Procedure:

<u>Provide Background Materials to the IAP</u> - NWRI and WRA will work with CDPHE and WRCO stakeholders to compile and provide relevant meeting-specific background materials for IAP members to review prior to each planned meeting. This process will include:

• Collect appropriate background materials relevant to the IAP review. Background materials may be developed by CDPHE, WRCO stakeholders and/or the project team.



Last Updated: July 5, 2017

Tasks

- Organize materials into binders and/or prepare electronic files (such as PDFs).
- Distribute materials to IAP members through mail or email approximately two weeks prior to each planned IAP meeting to ensure adequate review time.

<u>Coordinate IAP Meeting Logistics and Attendance</u> - In collaboration with WRCO, the NWRI team will coordinate logistics for IAP meetings. Specifically, this process will include:

- For Web-Enabled Conference Call Meetings of the IAP:
 - Coordinating schedules to select meeting dates.
 - Inviting attendees, participants, and/or observers, such as local stakeholders, regulators, and others, if needed.
 - Managing logistics during the course of the meeting, including technical aspects associated with the web-enabled conference calls.
- For In-Person Meetings of the IAP:
 - Coordinating schedules to select meeting dates.
 - Locating and reserving meeting facilities and/or locations relevant to the study. Venues will have adequate seating and accommodate audio/visual set-up, internet access, and web-enabled conference calls.
 - Arranging transportation and lodging at a nearby hotel for out-of-town members of the IAP. Note: NWRI will coordinate and make payment arrangements for all IAP members' travel and hotel needs.
 - Inviting additional attendees and/or observers, such as local stakeholders, regulators, and others, if needed.
 - Managing logistics during the course of the meeting, including meals, audio/visual needs, and web-enabled conference calls.
 - Providing supplies for the meeting, such as photocopies, name badges, name tents, writing tablets, pens, and other items.
 - Coordinating a site tour of relevant facilities, if needed.

<u>Develop Meeting Materials</u> - Meeting materials consist of (a) the agenda, (b) presentations, and (c) supporting documents, as needed. Specifically:

- The NWRI team with input from CDPHE and WRCO will develop an agenda for each meeting in collaboration with the IAP Chair to determine the appropriate topics.
- CDPHE, WRCO and the project team will prepare presentations addressing topics identified in the agenda. Visual aids, handouts, and other materials used to augment the presentations will be provided to the IAP in advance of or during the meeting.
- Additional materials prepared by the project team and/or reference materials may be assembled, as needed, for the IAP to review.

<u>Facilitate IAP Meetings</u> - The web-enabled conference call meetings may span two to three hours (to up to half a day). In-person IAP meetings may be held over a one or two day period. The timing and length of the meeting will vary depending on the scope of the meeting. In terms of responsibilities NWRI, in coordination with the IAP Chair, will administer the meetings. Duties may include (depending on the type of meeting):

- Room set up
- Facilitating web-enabled conference call services
- Welcome and introduction
- Overview of the IAP process
- Attendance (recorded on attendance sheet)
- Note taking/meeting minutes
- Administering logistics for IAP members (air travel, local transportation, hotel reservations, meals, etc.)



Last Updated: July 5, 2017

Tasks

- Administrative support (photocopying, etc.)
- Report development, editing, formatting, etc.
- Other meeting facilitation services, as needed.

The IAP Chair will serve as the meeting moderator. Duties will include adhering to the agenda schedule, facilitating questions and answers, and preparing an outline for the follow-up IAP memorandum or report. CDPHE, WRCO and the NWRI project team will prepare presentations relevant to the study.

<u>IAP Meeting Memoranda</u> - The IAP will produce an IAP Meeting Memorandum after each meeting. A draft of each IAP Meeting Memorandum produced by the IAP will be submitted to CDPHE, WRCO and appropriate stakeholders for review and comment to eliminate any unintended inconsistencies/errors or request clarification. The final content of all IAP memoranda is determined by the IAP.

Grantee Deliverable: Describe the deliverable the grantee expects from this task

- IAP meeting reports for each meeting of the IAP.
- Meeting planning, preparation, coordination and facilitation as described all four IAP meetings.

CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task

• Dates of meetings and IAP meeting reports if requested.

Tasks

Provide a detailed description of each task using the following format:

Task 3 – Project Team Meetings with IAP Chair

Description of Task:

Before the first and between each of the IAP meetings and before the Draft guideline document is finalized, there will be meetings between the IAP Chair and the project team (NWRI and WRA) by teleconference. These meetings will serve as an opportunity for quarterly IAP meeting preparation, and to discuss Stakeholder input. Meetings will be organized, facilitated, and meeting minutes will be prepared by the project team as part of the overall project management. CDPHE and WRCO stakeholders will be invited to join these meetings and any participation will be an "in-kind" contribution to the project.

Method/Procedure:

<u>Coordinate Project Team Meeting Logistics and Attendance</u> - In collaboration with WRCO, the NWRI team will coordinate logistics for team meetings. Specifically, this process will include:

- For Web-Enabled Conference Call Meetings of the IAP:
 - Coordinating schedules to select meeting dates.
 - Inviting attendees, participants, and/or observers, such as local stakeholders, regulators, and others, if needed.
 - Managing logistics during the course of the meeting, including technical aspects associated with the web-enabled conference calls.

<u>Project Team Meeting Minutes</u> – The NWRI team will produce minutes after each meeting which will be shared with the IAP and be made available upon request to CDPHE and WRCO stakeholders.



Tasks

Grantee Deliverable: Describe the deliverable the grantee expects from this task

• Meeting minutes available upon request.

CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task

• Dates of meetings and meeting minutes if requested.

Tasks

Provide a detailed description of each task using the following format:

Task 4 – Develop Final Interim Guidelines Document

Description of Task:

The IAP will draft an interim guidance document detailing the technical aspects needed to establish DPR regulations in Colorado that are flexible and protective of public health.

Method/Procedure:

Draft Guidelines Document

The IAP will draft a guidance document that will build off the DPR regulatory framework currently being developed by CDPHE and WRCO. Technical categories (which have been identified during WRCO's current DPR project) to be detailed in the guidance document will include, but are not limited to terminology, source control, wastewater treatment, pathogen disinfection/removal, chemical pollutant removal, advanced treatment processes, monitoring requirements, and education and outreach. (Additional categories to be addressed by CDPHE that may be covered to some extent, but are outside the scope of this proposed project, are: reporting, facility operations/certification programs, and technical/managerial/financial capacity.) For each category, the technical needs for regulation, policy, and guidance will be detailed in the guideline document. The IPA will also provide recommendations for specific pathogen and chemical pollutant concentrations and removal rates based on peer-reviewed research to support a DPR regulation proposal and supporting policies.

The Draft will be reviewed by CDPHE and WRCO stakeholders, with feedback provided through WRA, for compilation and then transfer to NWRI.

Grantee Deliverable: Describe the deliverable the grantee expects from this task

• "Colorado Guidelines for Direct Potable Reuse" interim guidance document in final form

CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task

• "Colorado Guidelines for Direct Potable Reuse" interim guidance document in final form



Tasks

Provide a detailed description of each task using the following format:

Task 5 – Project Management and Grant Administration

Description of Task:

The NWRI team, including WRA, will manage all aspect of the project with oversight by WRCO and input from CDPHE. CWCB grant fund administration, invoicing and reporting occur under this task.

Method/Procedure:

<u>Project Management</u> - This task includes general project management including tracking of project progress, budget, and schedule, and developing and submitting invoices to the WateReuse Association (the contracting agent) and the CWCB.

<u>Progress Reports</u> - The applicant shall provide the CWCB with a progress report every six months describing the status of the tasks in the statement of work, including a description of any major issues that have occurred and any corrective action taken.

Grantee Deliverable: Describe the deliverable the grantee expects from this task

- Project management tracking of project progress, budget, and schedule.
- Project management tracking of grant and applicant funding, and invoicing.
- Six month progress report(s) to the CWCB

CWCB Deliverable: Describe the deliverable the grantee will provide CWCB documenting the completion of this task

- CWCB grant invoices
- Progress report(s) and Final Report that meet the requirements of the grant.

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. The CWCB may withhold reimbursement until satisfactory progress reports have been submitted.



Reporting Requirements

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 withhold disbursement the last 10% of the budget until 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.



COLORADO Colorado Water

Conservation Board

Department of Natural Resources

Colorado Water Conservation Board

Water Plan Grant - Exhibit A

Budget and Schedule

Date: October 1, 2017

Name of Applicant: WateReuse Colorado

Name of Water Project: Development of Colorado Guidelines for Direct Potable Reuse

Task No.	Task Description	Start Date ⁽¹⁾	End Date	Water Project Funding Category	Grant Funding Request	Match Funding	Total		
1	Organize Independent Advisory Panel	3/15/2018	4/30/2018	Conservation/Land Use	\$3,835	\$2,065	\$5,900		
2	IAP Meetings	4/15/2018	2/28/2019	Conservation/Land Use	\$39,650	\$21,350	\$61,000		
3	Project Team Meetings with IAP Chair	4/15/2018	3/31/2019	Conservation/Land Use	\$4,290	\$2,310	\$6,600		
4	Develop Final Interim Guidelines Document	3/1/2019	4/30/2019	Conservation/Land Use	\$12,350	\$6,650	\$19,000		
5	Project Management & Grant Administration	3/15/2018	4/30/2019	Conservation/Land Use	\$4,875	\$2,625	\$7,500		
	Total					\$35,000	\$100,000		

(1) Start Date for funding under \$100K, minimum 45 Days from Board Approval; Start Date for funding over \$100K, minimum 90 Days from Board Approval. Round values up to the nearest hundred dollars.

Reimbursement eligibility commences upon the grantee's receipt of a Notice to Proceed (NTP)

•NTP will not be accepted as a start date. Project activities may commence as soon as grantee enters contract and receives formal NTP if prior to the listed "Start •The applicant shall provide a progress repost every 6 months, beginning from the date of contract execution.

•CWCB will withhold disbursement of the last 10% of the total grant amount until a Final Report is completed to the satisfaction of CWCB staff (2017 CWP Grant

Water Department

Water Administration 15151 E. Alameda Parkway, Ste. 3600 Aurora, Colorado 80012 303.739.7370



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October 2, 2017

Laura Belanger, P.E. Water Resources & Environmental Engineer Western Resource Advocates 2260 Baseline Road, Suite 200 | Boulder, CO 80302 office: 720-763-3718 | cell: 303-215-9122 fax: 303-786-8054

Re: Letter of Intent to Participate in WateReuse Colorado Project for Direct Potable Reuse

Dear Ms. Belanger,

On behalf of Aurora Water I am pleased to affirm our intent to partner with the WateReuse Colorado team on Direct Potable Reuse efforts in our state and continue the development work already initiated on this topic. To this end, Aurora Water will commit \$5,000 towards a cash contribution in matching funds for a Colorado Water Conservation Board grant application to complete this work.

We appreciate the quality and expertise of the team you have assembled to conduct this work and we look forward to working with you and the Colorado water reuse community to expand water reuse in our state.

If you need any additional information please contact Greg Baker at gbaker@auroragov.org or by phone at 303.739.7081.

Respectfully,

Greg Baker Manager of Public Relations Aurora Water



September 20, 2017

Laura Belanger, P.E. Water Resources & Environmental Engineer Western Resource Advocates 2260 Baseline Road, Suite 200 | Boulder, CO 80302 office: 720-763-3718 | cell: 303-215-9122 fax: 303-786-8054

Re: Letter of Intent to Participate in WateReuse Colorado Project for Direct Potable Reuse

Dear Ms. Belanger,

On behalf of Denver Water I am pleased to affirm our intent to partner with the WateReuse Colorado team on Direct Potable Reuse efforts in our state and continue the development work already initiated on this topic. To this end, Denver Water will commit \$3,000 towards a cash contribution in matching funds for a Colorado Water Conservation Board grant application to complete this work.

We appreciate the quality and expertise of the team you have assembled to conduct this work and we look forward to working with you and the Colorado water reuse community to expand water reuse in our state.

If you need any additional information please contact Abigail Antolovich at Abigail.antolovich@denverwater.org or by phone at 303-628-6203.

Regards,

Abigail Antolovich, PE

Water Reuse, Efficiency, and Innovation Leader Denver Water



8400 East Prentice Avenue Suite 315 Greenwood Village, CO 80111

Phone 720 216 5158 Fax 720 216 5154

September 28, 2017

Laura Belanger, P.E. Water Resources & Environmental Engineer Western Resource Advocates 2260 Baseline Road, Suite 200 Boulder, CO 80302

Re: Letter of Intent to Participate in WateReuse Colorado Project for Direct Potable Reuse

Dear Ms. Belanger,

On behalf of the South Metro Water Supply Authority, I am pleased to offer our financial support to WateReuse Colorado on advancing Direct Potable Reuse efforts in Colorado and to supplement the DPR Regulatory Framework project that is ongoing.

South Metro Water Supply Authority will commit \$2,500 towards a cash contribution in matching funds for a Colorado Water Conservation Board grant application to complete this work. We look forward to working with you on this important project.

If you need any additional information please contact Rick Marsicek (Director of Engineering) at (720) 216-5158 or via email at <u>rickmarsicek@southmetrowater.org</u>.

Sincerely.

Lisa Darling, Executive Director



September 27, 2017

Laura Belanger, P.E. Water Resources & Environmental Engineer Western Resource Advocates 2260 Baseline Road, Suite 200 | Boulder, CO 80302

Re: Letter of Intent to Participate in WateReuse Colorado Project for Direct Potable Reuse

Dear Ms. Belanger:

On behalf of Castle Rock Water, I am pleased to offer our financial support to WateReuse Colorado on advancing Direct Potable Reuse (DPR) efforts in Colorado and to supplement the DPR Regulatory Framework project that is ongoing.

Castle Rock Water will commit \$2,500 towards a cash contribution in matching funds for a Colorado Water Conservation Board grant application to complete this work. We look forward to working with you on this important project.

If you need any additional information, please contact Matt Benak, Water Resources Manager at 720-733-6037 or via email at mbenak@crgov.com.

Sincerely,

Mark Marlowe Director of Castle Rock Water

cc: Matt Benak, Water Resources Manager



*** Letter of Commitment ***

September 20, 2017

Laura Belanger, P.E. Water Resource & Environmental Engineer Western Resource Advocates 2260 Baseline Road, Suite 200 Boulder, CO 80302

RE Letter of Commitment to provide a portion of matching funds

Dear Ms. Belanger,

I am writing to express Plum Creek Water Reclamation Authority's (PCWRA) support of the continued progress toward direct potable reuse (DPR) in Colorado.

PCWRA will commit one thousand dollars (\$1,000) to aid in meeting the 50% match requested by the Water Conservation Board.

Sincerely,

Edward Bonham Assistant Authority Manager

cc: Weston Martin

File



390 Interlocken Crescent, Suite 800, Broomfield, Colorado 80021 P. 303.635.1220 F. 303.635.1373

September 28, 2017

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

Subject:Letter of Intent to Participate in WateReuse Colorado Project:Development of Treatment and Monitoring Guidelines for Direct Potable Reuse in Colorado

Dear CWCB Board Members and Staff:

Carollo Engineers, Inc. is pleased to partner with WateReuse Colorado on Direct Potable Reuse efforts in our state and continue the regulatory development work already initiated. To this end, Carollo will commit \$5,000 as a cash contribution as part of local cost-share funds toward the Colorado Water Conservation Board Water Plan grant application to complete this work.

We appreciate the quality and expertise of the team you have assembled to conduct this work and we look forward to working with you and the Colorado water reuse community to expand water reuse in our state.

If you need any additional information please contact me at <u>irehring@carollo.com</u> or 303.404.6309.

Sincerely,

CAROLLO ENGINEERS, INC.

John P. Rehring, P.E. Vice President

JPR:jpr

cc: Andrew Salveson, Carollo Laura Belanger, Western Resource Advocates



Carollo commitment letter WRCO DPR reg development 092817.docx



September 28, 2017

Ms. Brenley McKenna, President WateReuse Colorado c/o Water Research Foundation 6666 W. Quincy Avenue Denver, CO 80235-3098

RE: Letter of Intent to Contribute to the WateReuse Colorado DPR Project

Dear Ms. McKenna:

MSK Consulting, LLC (MSK) supports WateReuse Colorado's (WRCO) proposed "Development of Treatment and Monitoring Standards for DPR" project and the CWCB Grant Funding Proposal associated with it. MSK commits to a \$2,000 contribution to the matching funds portion of the CWCB application.

I appreciate WRCO's efforts to advance water reuse. This project is the next logical step to prepare for Direct Potable Reuse in Colorado. I believe the proposed approach and team will effectively utilize the funding sources.

Please contact me if you have any questions at 303-903-0918 or dave@mskwater.com.

Thank you.

MSK Consulting, LLC

Jos 12

David L. Takeda, P.E. Owner



CH2M 9189 S. Jamaica St. Englewood, CO 80112 O 720-286-5345 www.ch2m.com

Laura Belanger, P.E. Western Resources Advocates 2260 Baseline Road, Suite 200 Boulder, CO 80302

September 27, 2017

Subject: Letter of Intent to Participate in WateReuse Colorado Project for Direct Potable Reuse

Dear Ms. Belanger,

This letter confirms that CH2M HILL Engineers, Inc., (CH2M) will provide \$2,000 to WateReuse Colorado in support of the next phase of the Colorado Direct Potable Reuse Framework development. It is our understanding that this contribution will be included as part of a compilation of matching funds from several entities (including WateReuse CO) in pursuit of grant funding from the Colorado Water Conservation Board (CWCB) for the development of treatment and monitoring standards for direct potable reuse in Colorado. This work will be primarily conducted by an Independent Advisory Panel (IAP) and the project will be managed and administered by Western Resources Advocates.

CH2M has been actively involved in WateReuse CO and a participant in the initial phase of the Colorado DPR Framework project. We are glad to continue our support of this collaborative and important project to advance the implementation of potable reuse in Colorado.

If you need any additional information, please contact Larry Schimmoller at <u>larry.schimmoller@ch2m.com</u> or 720-286-5345 Regards,

CH2M

Tang. hhimthe

Larry Schimmoller, P.E., Global Practice Leader for Water Reuse



Stantec Consulting Services Inc. 1560 Broadway, Suite 1800 Denver, CO 80122

September 28, 2017

Attention: Laura Belanger Western Resource Advocates 2260 Baseline Road, Suite 200 Boulder, CO 80302

Dear Ms. Belanger,

Reference: WRCO Project "Development of Guidelines for Direct Potable Reuse"

Stantec is pleased to support the proposed WateReuse Colorado (WRCO) project titled "Development of Guidelines for Direct Potable Reuse." Stantec is committed to supporting this project with a \$2,000 cash donation as well as \$5,000 in in-kind support through staff engagement in the project over the coming year for a total estimated contribution value of \$7,000.

Regards,

STANTEC CONSULTING SERVICES INC.

Bob Armstrong, P.E. Vice President Northwest Water Regional Business Leader Phone: +1 (720) 837-7816 bob.armstrong@stantec.com

EXHIBIT C WateReuse Colorado Water Plan Grant Application to the CWCB

Basin Roundtable Letters of Support

- Colorado Basin Roundtable letter of support approved of at 9/25 meeting. Letter is pending.
- Metro Roundtable letter is pending the October 12, 2017 roundtable meeting (request for letter of support has been made)
- South Platte Basin Roundtable letter is pending the November 14th, 2017 (anticipated) roundtable meeting (preliminary inquiry has been made).

State Agency Letter of Support

• CDPHE WQQD Letter of Support (attached)



COLORADO Department of Public Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

September 29, 2017

Mr. Kevin Reidy Water Supply Planning Section Colorado Water Conservation Board 1313 Sherman Street, Room 718 Denver, CO 80203

Dear Mr. Reidy:

The Safe Drinking Water Program of the Water Quality Control Division of the Colorado Department of Public Health and Environment (CDPHE) is pleased to provide a letter of support for WateReuse Colorado's proposed project to develop interim treatment and monitoring guidelines for direct potable reuse (DPR) in Colorado. CDPHE has been extensively involved in WateReuse Colorado's current project "Advancing Direct Potable Reuse to Optimize Water Supplies and Meet Future Demands." The proposed project is a timely next step to maintain momentum and fill in needed details in order to keep the development of a more complete DPR regulatory framework moving forward, including regulations. We support this collaborative project that will facilitate the safe and prudent reuse of reusable water supplies to help meet Colorado's municipal and industrial water supply gap.

The proposed project is consistent with Colorado's Water Plan that includes a Critical Action to "Evaluate regulations to foster reuse of water supplies while protecting health and the environments." The Water Plan states "Widespread development of potable reuse will be an important facet of closing the future water supply-demand gap." The Water Quality Control Commission (WQCC) has indicated that non-potable reclaimed water regulations should "further promote reuse of reclaimed domestic wastewater by providing a comprehensive framework which, when followed, will assure responsible management of operations and a product of a quality compatible with the state's goals of protecting the public health and the environment." We believe that as water reclamation plans to extend into the potable arena, a similar approach is appropriate and we look forward to collaborating on this with the project team.

In addition to our written support of the WateReuse Colorado project, our office will actively participate in the project to ensure the interim guidelines are useful in developing the scientific and technical supporting information needed to develop the eventual regulatory framework, including a WQCC rulemaking process for DPR.

Sincerely,

Ron Falco, P.E. Safe Drinking Water Program Manager Water Quality Control Division

